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Trade Unions and Wage Claims

ANY uncertainty as to the wisdom of lodging a wage claim for railwaymen should be dispelled by reference to the report for 1952 of the British Transport Commission, discussed on another page. The report shows clearly how the railway wage increases, effective in the last quarter of the year and amounting to £16 million in a full year, had to be passed on to transport users, resulting in higher fares and ultimately in higher prices for consumer goods bought by the men and their families concerned. Lord Hurcomb, Chairman of the Commission, has said that even without any great increase in labour costs, which by virtue of numbers means in effect the wages of railwaymen, there will probably be a deficit in the B.T.C. revenue account for the current year. None of the three big railway unions so far has lodged a claim, and it is to be hoped that they will see the wisdom of refraining from doing so. The institution of the railway contributory pensions scheme now under consideration by the Minister of Transport, Mr. Alan Lennox-Boyd, will aggravate the financial burden on the Commission; but by increasing security it should reduce the temptation to press for pay increases. Moderation has been shown by the Associated Society of Locomotive Engineers & Firemen, which earlier this week accepted the working of a lodging turn, as recorded in our Staff and Labour columns, and now is prepared to participate in fresh talks on this. Outside the railways negotiations are starting on many claims. The biggest of these is that of the Confederation of Shipbuilding & Engineering Unions, for a general advance of 15 per cent and affecting some 3,000,000 workers. British Railways staff are not directly affected, for though many railwaymen are members of unions affiliated to the Confederation, the railway workshop staff concerned have their own negotiating machinery.

Colonel C. H. W. Edmonds

COLONEL C. H. W. EDMONDS, whose death we record this week, had a varied career in signalling, in both industry and public service. He was concerned in several patents; of these the best-remembered probably is that covering the closing of single-line tablet stations, obtained when he was with McKenzie & Holland in Worcester. That firm had absorbed the business once owned by Dutton & Company, and continued to work the patents of S. T. Dutton and R. H. C. Nebile applying to that kind of working which involved special long-section tablet instruments issuing square-shaped tablets. Some of these are known to have been in use in Southern England until recently. Colonel Edmonds, adapting the locking mechanism used in Sykes lock-and-block system, with which McKenzie & Holland had had considerable experience, devised an arrangement for carrying out both short- and long-section working over the same line wire. This met with some favour on certain railways, such as the Somerset & Dorset and the Highland, and whether any example is still in service we cannot say. It necessarily involved a certain amount of complexity and most signal engineers have preferred in this matter more line wires to more apparatus.

No Subsidy for Transport in Ulster

THE Northern Ireland Government still intends to make transport pay its way without subsidies. This was made clear by Mr. W. V. McCleery, Northern Ireland Minister of Commerce, when he replied to the debate on the second reading of the Great Northern Railway Bill in the Senate at Stormont last week. The joint board to administer the G.N.R.(I.) will have to reduce "with all possible speed" the losses of the railway, now £850,000 a year. The technical inquiry being made by officers of the G.N.R. and of the Ulster Transport Authority will show what steps can be taken to reduce them. Every opportunity has been taken in the Bill, Mr. McCleery says, to encourage the co-ordination of and co-operation between the U.T.A. and the G.N.R.(I.). The Minister intends to appoint the Northern Ireland representation on the joint board from present Members of the Authority. The Ulster Government does not claim that the new organisation will cure overnight the financial troubles of the Great Northern, but Mr. McCleery's claim is that the Bill is the best that can be devised to take into account the complex factors and that it will enable public transport within the Six Counties to be planned as a whole and pave the way for carrying out the necessary measures for operating it more efficiently. Meanwhile the Bill has had its third reading and now awaits the Royal Assent.

Institute of Transport Congress in Scotland

NO better venue than Glasgow could be found for the Institute of Transport Congress to be held there next week under the chairmanship of Mr. C. T. Brunner, President of the Institute. Besides the claims of Glasgow as an industrial, commercial, and cultural centre, the beauty of its surroundings, and the hospitality of its citizens, there are in and around the city a number of features of extra-

ordinary interest in the fields of land, water, and air transport. By a coincidence the Minister of Transport, Mr. Alan Lennox-Boyd, showed in Parliament earlier this week the interest that the Government is taking in Scottish transport, more particularly in implementation of the Inglis Report on passenger transport in the Clyde area, as recorded on another page; this is referred to also, as regards railway electrification, in the British Transport Commission report for 1952, discussed elsewhere in this issue. These matters will add to the interest of Glasgow for Members of the Institute concerned with passenger travel. A paper to be read that promises a discussion of wide interest is that by Sir Reginald Wilson, Comptroller of the B.T.C., entitled "A Framework for Public Transport." In addition excursions have been organised near and far from Glasgow, catering for a variety of tastes.

British Railways Travel Centre

OPENING British Railways new travel centre in Lower Regent Street in the heart of the West End of London last Tuesday, Mr. John Elliot, Chairman of the Railway Executive, said this was the result of the need to centralise ticket selling in the West End. British Railways Continental traffic moreover has continued to grow, and he is optimistic about its future, despite competition from air and other forms of transport. A committee of specialists in travel to and from the Continent accordingly has been set up to advise on trends foreseen in such travel in the next 25 years. The new office is expected to ease the strain on British Railways Continental ticket offices in London. A brief description of it and of the opening ceremony is given on another page. With its central position and carefully devised and chosen lighting, decoration, and furniture, it provides the railways with a shop window well up to the standard of other West End sales premises, whether they sell transport, or any other commodity. It will also result in economies, for its opening has enabled four existing ticket offices in this part of London to be closed.

Overseas Railway Traffics

MARCH traffic receipts of the Gold Coast Railway were £394,874, £76,020 more than for March of last year. This brings the aggregate for the financial year ended March 31, 1953, to £4,035,635, compared with £3,473,386 for 1951-52. It has not yet been stated how far these improved results were the result of heavier traffic. The first month of the new financial year, April, saw receipts of £382,362, an improvement of £58,836 on April, 1952. The general trend seems to have been continuance of the growth of goods and passenger traffic; and as traffics fluctuate seasonally, no deduction can be made yet from these figures. The February receipts of the Barsi Light Railway, which is to be absorbed into the Central Railway of India next January, were down on those of the previous February, whilst a slight increase for March was compensated by a decrease in April explained by the incidence of a fair. The financial year ended on March 31 with an aggregate of Rs. 4,836,500, against Rs. 5,329,200 for 1951-52, with an average per mile per ten days of Rs. 793.45, against Rs. 871.89.

Unified Control in East Africa Upheld

THE East Africa High Commission has now considered the report of the committee which inquired into the working of the port of Mombasa, in the light of the views on the report of its Transport Advisory Council. On policy questions, the Council has advised the High Commission that neither the proposals for separate management of the port nor separation of the ports from the railways, on which we commented editorially in our April 17 issue, should be adopted. The closest possible integration of ports and railway services is, it believes, an "inescapable need." Duplication of organisation and equipment would mean heavy additional expenditure without compensating advantages. The Council does not doubt that the achievements of the East African Railways & Harbours during the past years of great increase in traffic, with no corresponding increase in capacity, have been possible only because of the single executive management of railways and ports. The High Commission, however, has accepted the Transport Advisory Council's view that the managerial organisation of the E.A.R. & H. should be examined in the light of present-day conditions and likely developments. It wishes the Council to consider closely the establishment of the post of Deputy General Manager and the appointment of an Assistant General Manager (Harbours & Inland Waterways).

The Canadian National Thrusts North

FIVE hundred miles north-west of Winnipeg and the same distance north of the Canadian-United States border the Canadian National Railways are building a line, 144 miles long, from Sherridon, on a branch from the Hudson Bay line, to Lynn Lake in a remote part of Manitoba, to serve a great new nickel and copper ore field discovered during the war. The railway, surveyed in 1951, is expected to be completed by the end of this year, when the new mine is scheduled to begin production. About 3,000,000 cu. yd. of rock and earth are being moved. Gradients and curvature are fairly heavy, but the formation allows of improvement if heavier tonnage has to be carried in future. Mechanisation means that only 40-50 men are needed for the entire track-laying operation and the average daily rate of progress is 3,600 ft. The rails should reach Lynn Lake by the autumn. Four 1,200-h.p. diesels will provide the motive power at the outset. Minerals will form the bulk of the traffic but fish and pulpwood may also be carried. Lynn Lake may not indefinitely remain the terminus. After inspecting the line Mr. S. F. Dingle, Vice-President (Operation), C.N.R., expressed the hope that it might be extended further north to keep abreast of mineral development.

Higher Steel Production and Profits

IN its second annual report the Iron & Steel Corporation of Great Britain is able to show a profit from its group of companies for the year to September 30 last of £64 million. After taxation and interest charges this is reduced to £16 million. The Corporation records with satisfaction the present state of the industry, observing that production of steel is now running at a higher rate than ever before. Supplies of steel are similarly at a record level and the demand for steel, except for plates and some special categories, is being met. Total supplies of steel increased from 17,400,000 tons in 1951 to 18,500,000 tons in 1952 and a further considerable increase in output is envisaged for the current year. Steel plate will remain a problem for the industries which use it extensively, for the process of allocation has been complicated by the changed demands made on this material by the shipping industry, as noted in our May 22 issue. Reviewing research activities, the Corporation reports that the process for automatically controlling the gauge of rolled strip, which has undergone trials at the works of John Summers & Sons Limited, has shown itself satisfactory and is nearly ready for industrial development.

Western Australian Estimates and Orders

BECAUSE of a shortage of loan funds an estimated requirement of £12,000,000 for modernisation in Western Australia in the new financial year will have to be cut substantially, according to Mr. H. Styants, Minister for Railways. The Railway Commission already has commitments for the year of £7,200,000, and the overall estimate of £12,000,000 will have to be revised. This cut will not affect the plan to relay 100 miles of track at a cost of £800,000, which is considered essential. The railways are expecting in the autumn the first deliveries of railcars and diesel-electric locomotives being built in Great Britain, which Mr. C. W. Clarke, Assistant Commissioner (Engineering), has recently visited, to inspect their construction and that of the 24 "VF" steam locomotives on order. Par-

ticulars of these orders were given in an editorial article in our issue of May 1. The railcars, totalling 22, will enable the Perth suburban services to be wholly worked by them, except at peak periods, within the next three years. The diesel locomotives comprise 48 "X" class for main-line and 18 "Y" class for branch-line work. Of 3,868 wagons ordered in Britain and Belgium, 1,200 have been delivered.

Radar Technique in Hump Yard Control

AN application unforeseen by its original observer has been made of the so-called Doppler effect, of which the most familiar manifestation is the changing note of the whistle of a passing train. At the new Ernest Norris Yard of the Southern Railway System, U.S.A., described elsewhere, the change of frequency with relative motion is used to measure the speed of wagons approaching the retarders as they run down the hump. A U.H.F. radio signal is used in place of an audible note. A receiver adjacent to the transmitter picks up the signal direct, and also its reflection from an approaching wagon. The latter component changes in frequency according to the speed of the wagon, and is heterodyned with the direct pick-up. The resultant beat note is fed to a frequency-sensitive meter calibrated in miles per hour. One meter is mounted in the case beside the track housing the transmitter-receiver equipment, as can be seen in one of the illustrations accompanying the article. Its indications are repeated by another meter at the retarder controller's position. This is not the first application of the system for such a purpose, although of particular interest in view of the importance of the yard and its advanced technical equipment in other respects. A similar installation was made previously at the Knoxville, Tennessee, Yard of the same railway.

New Works in the Orange Free State

THE South African Railways are carrying out a large programme of new works and reconstruction in the Orange Free State which will cost nearly £14,000,000. Expanding industry and agriculture within the Free State and the increasing industrial activity on the Rand and in other parts of the Transvaal to the north are making heavy demands on the railways in the Free State, and the programme has therefore been framed on generous lines. More than £7,000,000 is being spent on enlarging and re-equipping the workshops at Bloemfontein and the heavily-taxed main line between there and Kroonstad is being doubled, at a cost of some £4,000,000, for a distance of 111 miles. New stations and deviations are included. The marshalling yard at Bloemfontein is being enlarged and a new yard being laid out at Kroonstad; these two works together will cost £665,000. Another costly item, but essential to remove a hindrance to traffic, is the replacement of the bridge over the Vaal at Vereeniging which, not being wholly adequate for present-day weights of stock, has imposed a 10 m.p.h. restriction on trains crossing it.

Visit to Stafford and Preston Works

ON Monday and Tuesday last some 160 guests, who included overseas visitors, were taken on a conducted tour of the Stafford and Preston works of the English Electric Co. Ltd., by invitation of the Chairman and Directors of the Company. During the visit the guests were able to see the important part played by British electrical manufacturers in the export trade. At the Stafford works the visitors inspected the Nelson Research Laboratories, and the heavy and light machine and erecting shops, where they were shown in course of machining and erection hydrogen-cooled turbo-alternators of from 70,588 to 76,000 kVA. for home and overseas, together with water turbine-driven alternators of from 16,000 to 122,000 kVA. and mercury-arc rectifiers for industrial and traction use. At the Preston works a wide variety of electric and diesel-electric locomotives and equipment was seen in course of construction and test, indicative of the firm's interests in the supply of railway motive power. A reference to the visit is included elsewhere in this issue.

Fifth Year of State Transport

THE British Transport Commission last year achieved a revenue surplus of £8·4 million, compared with £2·9 million for 1951 and the deficits for the first three years of its existence. The adverse balance on net revenue account at December 31, 1952, was reduced to £31·5 million. Last year British Railways net traffic receipts (other than cartage, on which a loss seems inevitable) were increased to £39·6 million from £34·9 million for the previous year, those of London Transport railways to £1·3 million from half-a-million, and those of the docks undertaking to £2·4 million from some £800,000. This is shown in the Commission's report for 1952, which has appeared about a fortnight earlier than last year; some details of the report are given elsewhere in this issue. The results for 1952 on the whole can be regarded as satisfactory for a difficult year and within the limits of the organisation of nationalised transport and the restrictions on charging then in force, though the heavy financial burdens imposed on the Commission in the last quarter and the depression in the textile industry resulting in loss of merchandise traffic made it clear that no considerable surplus was to be expected. They also point to accurate budgeting. The £8·4 million indeed is small compared with the turnover of over £600 million. It is for that reason precarious. Lord Hurcomb, Chairman of the Commission, predicted recently that if the application for an increase in passenger fares now pending is granted, and if there is no great increase in the cost of labour and materials, the current year will end with a deficit "which, though to be deplored, would not be frightening in amount."

The introduction to the report stresses the progress made in developing British Road Services and in plans for integration of rail and road transport, including long-distance services, despite opposition from some of the staff, up to the general election in October, 1951. The change of Government has necessarily put a halt to progress in this direction. The present Government also favours decentralisation of the railways, though its definite proposals are awaited in the forthcoming White Paper. The Commission is at pains to point out in its report that though the organisation of British Railways adopted in 1948 was in its opinion "requisite in laying the foundations of a unified railway service," it did, as had been intended, review it. Examination was delayed by the weather and other difficulties of the winter of 1950, but by the end of 1951 the B.T.C. had submitted to the Minister of Transport in what was by that time the new Government, proposals for a simpler form of railway organisation "which, while not sacrificing the advantages and economies of only to be secured by central control of certain essential matters, would lead to further decentralisation by devolution of authority to Regions, combined with the development of a road/rail service for freight traffic under a single commercial management." These proposals were superseded by the White Paper on general transport policy in May of last year and were never officially discussed with the Minister.

Exactly how the Commission intended to decentralise it is hard to see, except perhaps in devolution of sanction for expenditure. It is clear, however, that the Commission has preconceived notions as to the benefits of co-ordinated rail and road transport which are at variance with the Government general policy of denationalising road haulage and of free play for competition. These ideas imply a considerable degree of centralisation of both road and rail transport. What the Government plans are for the railways is not known at present. Despite reluctance, however, apparent in Parliamentary debates, to treat the Regions as financial entities in the future organisation, which would be difficult with the present relationship of Regional boundaries to traffic flow, the Government seems to intend to go far in decentralisation. The Commission on its own admission worked hard for three years to bring about and perfect the organisation of nationalised transport it thought best. Having for so long directed their efforts to that end, the men now at the head of the Commission may find

themselves in some difficulty in adapting themselves to the new order.

The disadvantages under which the several Executives of the B.T.C. functioned in 1952 are lucidly described. The wastefulness of "make-do-and-mend" for railway passenger and goods stock caused by the limitations on capital investment and use of steel is demonstrated, with some arresting figures: only 1,004 coaching vehicles were built for British Railways last year, against 1,923 in 1951, and 28,586 freight and service, against 37,796, whilst the 1951 construction itself was insufficient. The incidence and effects of the financial burdens which made themselves acutely felt in the last three months of the year are clearly shown. The slowness of the statutory machinery for obtaining authority for increases in charges, despite quick decisions by the Minister when procedure allowed, added much to these burdens, as did the fuel oil tax; the latter adversely affected not only British Road Services and London Transport buses, but also the provincial and Scottish bus groups. In staff and labour matters, Lord Hurcomb has drawn attention to the very small losses of working time in the various Executives through industrial disputes. The fact remains, however, that the wage increases which were granted during 1952 reached a total of £23 million in a full year.

The increased passenger receipts of British Railways are explained by higher fares, despite Government intervention in this matter last year. The report draws attention to a decline in parcels traffic attributable mainly to a recession last year in the textile industry. The decrease in general merchandise is attributed not to road competition but to reduced industrial production, reduced home demand for consumer goods, decreased imports, and shortage of raw materials. It is a satisfactory feature to observe that the rising trend of claims made against British Railways was arrested.

The report mentions many railway developments previously referred to in this journal. Of these one of the most remarkable is the closing of branch lines found after examination to be unremunerative for the traffic and after consultation with transport users; some 300 route miles were closed to passenger or goods traffic or both in 1952, bringing the total since 1948 to over 1,500. These closings and those of marshalling yards have helped materially to achieve the economies realised by British Railways now running at some £16 million a year.

Mention is made in the report of electric, diesel, and gas-turbine traction developments which will be already familiar. On electrification, however, the report states that after the Tilbury Line scheme, next in priority after the Pennine electrification, the B.T.C. has enjoined consideration of electrification in the provinces, notably in and around Glasgow with reference to the Inglis Committee report. Besides extension of some Southern Region third rail electrified lines, that of the Shenfield electrification is to be studied. No mention is made of main-line electrification between London and Rugby or Crewe, or of the East Coast route between London and Grantham.

On other activities of the Commission, the report demonstrates considerable efficiency in the management of British Road Services, despite their growing pains and the special disadvantages under which they have functioned since Government intentions were known. Credit is given to the economies in working of the ports, which with increased outward shipments of coal contributed to their good results.

The losses incurred on restaurant-car *table d'hôte* meals are regarded as inevitable; the substitution of "light catering" (presumably cafeteria service) is being investigated. This is by no means always a satisfactory alternative, for full meal service is an essential amenity with many travellers. It is a pity that refreshment cars and railway catering finally cannot be made a railway responsibility, with any necessary losses accepted in providing adequate passenger service. Unfortunately the Government has not expressed its intention of abolishing the Hotels Executive.

Mr. Dalton's Work in East Africa

SINCE the link-up of the Kenya & Uganda and Tanganyika Railways has taken place, the East African Railway Administration has become the largest of the Colonial railways, a position that was hitherto held by the Nigerian Railway. Not only is the system one of the largest, but it is among the most progressive and important in the Colonial territories of the British Commonwealth. Elsewhere in this issue we record the retirement of Mr. Alfred Dalton, who has been General Manager of the line since 1948, and during whose term of office not only as General Manager but also in previous positions a vigorous policy has been pursued with results that may be briefly demonstrated.

New lines have been constructed between Mtwara and Nachingwea and also at Mpanda in Tanganyika. The Mtwara line is being extended currently to Lumesule Juu. A further extension has been constructed in Uganda from Kampala some 205 miles to Kilembe, the first 45 miles of this railway to Mityana being due to be opened on August 1. Three re-laying projects have been carried out and one sanctioned. In Kenya, the whole of the 135 miles of the important Kisumu branch (the original Uganda Railway main line) is being re-layed in 60-lb. track, the old 50-lb. track being used for the Western Uganda extension. Of the main line from Nakuru to Tororo, 234 miles is being re-layed in 80-lb., replacing 50-lb. material, and 111 miles of this work has been completed. Similarly, 126 miles of the main line from Mombasa to Nairobi is being re-layed in 95-lb. material as against 80-lb., and a major re-laying, realignment, and ballasting programme is projected and partly sanctioned for the Tanganyika Central Line. This will allow the use of heavier and more powerful locomotives. It is interesting that the locomotive availability, approximately 70 per cent in 1948, is now 83 per cent. This increase is the result of the expenditure of literally hundreds of thousands of pounds on new machinery and improvements to locomotive workshops. Another facet of the great expansion realised in the last five years is the opening of over 20 new stations. Water supplies have been augmented, major depots and yards have been expanded, and at almost all points an increase has been made in the provision of transport facilities.

Mr. Dalton, as General Manager of a combined system of railway, port, and road services, was also responsible for the construction of eight new deepwater berths, two at the completely new port of Mtwara, three at Dar es Salaam, and a further three at the port of Mombasa. Work on the latter six is still in progress, with the rehabilitation and expansion of Tanga and Mombasa ports. Corresponding expansion and rehabilitation of inland marine and road motor services has taken place, involving a development of transport facilities over an area seven times the size of Great Britain.

These herculean labours have involved the engagement and training of personnel, the responsibility for which, while a heavy burden has been thrown on the existing staff, ultimately devolves on the General Manager. Apart from the obvious effort necessitated in such an undertaking, the practical difficulties involved where amalgamation of two separate transport undertakings occurs are considerable. In this case three separate Governments, each jealous of its own interests, had to be considered and each dealt with justly and to the general satisfaction. The problem of deterioration in the value of money, which has occurred in East Africa as everywhere else, creating new difficulties and consequent frequent review of staff terms and conditions of service, was also present. New regulations and legislation were and still are being framed to meet an ever-changing labour scene. Among these were the new East African tariff and East African staff regulations.

Concrete results are already to be seen from the changes effected during these last five years. The gross earnings of the East African Railways & Harbours for the complete year of 1948, including four months of separate earnings of the Kenya & Uganda Railways & Harbours and the Tanganyika Railways & Ports Services were £9,188,180. In 1952 the figure was £15,727,903. The volume of trade

has risen from £22 million in 1939 to £246½ million in 1952. Ton mileage in 1948 was 899,815,343—in 1952 it was 1,398,605,401.

The man responsible for this vast programme, known equally for his strict attention to individual justice as for his almost pedantic regard for detail and for his insistence on giving credit for work done by others where such credit was due, has found time to interest himself in all the Administration's social activities in Nairobi and in the general welfare of the staff throughout the system. His keen interest in rugby resulted in his long-standing presidency of the Nairobi Railway Rugby Club. His invariable stern query, as he took the Chair at annual meetings, of "Any other nominations for President?" automatically raises the ghost of a similar question: "Any other nominations for General Manager?" Mr. A. F. Kirby, who is succeeding Mr. Dalton, has a powerful personality to emulate. The success which has attended his grappling with difficult problems in Palestine and his recent intimacy with East African affairs is an assurance that there will be no hesitation in the progress of these railways.

Signalling Changeovers

AN inspection of any of the power signalling installations brought into use in Great Britain since the war, to mention no others, cannot fail to awaken admiration for the thought put into their design and the care bestowed on their manufacture and installation on site. These fine installations are not like many other engineering works, something which can be made and put in with comparatively little reference to what was there before. The traffic they are required to control is already in existence and being carried on with the aid of older, usually very much older, forms of apparatus, the functions exercised by which have to be transferred to the new with no danger to traffic and the minimum of interference with it. This calls for as much care and consideration as does the designing and making of the new equipment. The carrying out of these changeovers makes a great demand on the resourcefulness and organising capacity of the signal engineering staff and can present difficulties greater than any met with in planning and making the final apparatus.

Circumstances vary to some extent in almost every case and although no doubt certain rules of general application can be laid down, in every instance numerous small details have to be taken into account. The manner in which such changes can be effected varies also with the type of apparatus involved, but in some cases today it is possible to make certain preliminary transfers of function more easily than at one time; indeed, with some of the earlier forms of power signalling, anything of this kind would have been impossible. Making temporary adaptations of the old apparatus, however, although often unavoidable, is usually something to be kept to the practicable minimum, as it can involve considerable labour and the fitting of expensive equipment called on to work for a short time only.

The great interest and importance of this subject were emphasised when Mr. C. F. Challis opened a discussion on it on March 10, 1953, at the Institution of Railway Signal Engineers, as reported on another page. Some large changeovers have been made on the Southern Region, with which he is connected, since the war, and others are pending. He was thus able to speak authoritatively on the arrangements used on that Region, where the power lever frame has been adhered to, while among his hearers were many who had to deal with similar changes but involving relay interlocking circuits of various designs. The comments made by them served to confirm his view that nothing but most careful organisation and attention to detail, even such matters as provision of adequate refreshment facilities for staff, will ensure everything going according to plan. A point of interest referred to was that the type of traffic, and often the station layout, exercised great influence on the way in which the work could be done.

Prior to any actual changeover, however, a great deal of work has to be done in testing everything that can be tested, in order to make the final alteration with the minimum of effort. The amount of time that can be given to undisturbed possession of lines and so on will vary from place to place, and even the time of year and amount of daylight available have a considerable bearing on the framing of a programme. All concerned must be carefully instructed in what they have individually and severally to do, and close co-operation with the traffic department staff is essential. Stress was laid on the importance of having any hand signalmen thoroughly well trained, and of establishing effective communication by telephone or some form of wireless between the various individuals, of both the traffic and signal departments, stationed in the area to carry out the work in conjunction with the control from the boxes.

While the discussion dealt primarily with changeovers from mechanical to power signalling, many of the opinions expressed were almost equally applicable to other alterations, such as when extensive renewals have to be made to existing equipment without change of system. One of the most remarkable examples of this, typical of many, was the complete renewal of the mechanical locking of the old 244-lever West Box at Liverpool Street, Great Eastern Railway, in June, 1913. The engineers were given possession of the box at 12.45 a.m. on June 7 and the traffic, involving, with certain reductions, about 1,240 trains each weekday, was controlled by hand-signalmen stationed in 11 huts in the yard, communicating by telephone and megaphone, under orders from a temporary box fitted with block apparatus. Extraordinarily careful design and construction of the tappet mechanism, which was to replace the old cam-driven type, which had 3,000 pieces in it, enabled the work to be finished by the early hours of June 13, two whole days being given to testing the new locking which involved a very great number of combinations. After some delays on the first morning, everything worked smoothly, and no mishap occurred throughout the work.

Detailed Investigations into Sleeper Defects

IN no country is the ever-present problem of prolonging the lives of wooden sleepers receiving closer attention than in the United States. As recently described in an address by Mr. T. A. Blair, Chief Engineer of the Atchison Topeka & Santa Fe Railway, remarkably comprehensive investigations into the defects necessitating their renewal are being carried out on that system. Early in 1950, a chief inspector and four inspectors were specially deputed to accompany extra gangs engaged in such renewals and make detailed notes on the failures. In the two years 1950-51, 404,000 sleepers throughout the system were inspected, or 16 per cent. of the number renewed. For every sleeper a record was made of the cause of failure, date of laying, species of wood, and method of impregnation. Before 1923 pure creosote was used, but subsequently a mixture of creosote and petroleum has been standardised.

The failures were classified as (1) decay, (2) plate-cutting, (3) splitting, (4) shattering, (5) spike killing, (6) breaking (7) ring separation, and (8) accident. Five types of wood were involved, but 85 per cent of the sleepers examined were of pine or fir species more universally used than the other two, oak and gum. Of the total numbers of the conifer species inspected the following percentages of the renewals were due to the different classes of defect, and the figures in brackets denote the average ages in years of the sleepers removed because of various defects:—

Defect	Southern yellow pine		Western pine		Douglas fir	
	Percentage	Age	Percentage	Age	Percentage	Age
Decay	2	(23·7)	4	(28·1)	0	(21·9)
Plate-cutting ...	38	(22·1)	23	(26·2)	47	(21·6)
Splitting	17	(25·1)	35	(29·3)	26	(21·4)
Shattering ...	34	(24·3)	24	(31·2)	25	(21·8)
Spike killing ...	0	(21·5)	0	(24·7)	0	(27)
Breaking	0	(21·3)	6	(22·3)	0	(20·4)
Ring separation ...	3	(15·8)	0	(22·5)	0	(13·0)
Accident	6	(18·5)	8	(21·8)	2	(21·6)
Total ...	100	(23)	100	(28)	100	(21·6)

These figures are instructive, and the average ages by defects are proving valuable in devising means for increasing longevity. This table, however, does not give a complete picture as it does not include figures for renewals by section gangs, a defect that is being remedied in subsequent years. The Santa Fe records show that during the past five years main track renewals average 100 a mile, or an average life of over 30 years. Such careful and methodical measures should avoid any tendency to take hasty and costly remedial action that may eventually prove to be the incorrect solution of the problem.

North Borneo Railway

THE report on the North Borneo Railway for the year ended December 31, 1951, a copy of which we have received from Mr. H. Gatford, the General Manager, shows that for several reasons it proved to be a most difficult year. Maintenance, operation and rehabilitation were all seriously affected by shortages of staff, labour and materials, and by abnormal rainfall. The labour situation became critical largely because of a wholesale drift to the better-paid rubber industry. Of the 23 permanent way gangs, each nominally twelve men strong, three had been reduced to two men and one man by the end of the year, and their lengths were almost lacking in maintenance. Gangers, fearing blame for possible accidents on this account, left the railway, and traffic was kept moving without mishap only by introducing speed restrictions over long lengths of line. Increased special and cost-of-living allowances and the provision of canteens and other amenities failed to check this drift, and contractors also were unable to recruit labour.

Inability to obtain sleepers further added to maintenance difficulties, though the supply improved at the end of the year. Deliveries of 60-lb. rails from England were limited to 500 tons a quarter and ceased in September, but the administration was fortunate in purchasing two track miles of suitable secondhand 85-lb. material in Hong Kong. The serious breakdown in November, 1950, mentioned in the previous year's report, was severely felt until the autumn of 1951, when one Fowler and two Hunslet diesel locomotives were received. The full benefit of their delivery was not felt until several months later because the staff was slow in learning to handle them. On the mechanical side the labour situation was less acute and some artisans were recruited from Hong Kong. The administration's greatest anxiety was the inadequate supply of wood fuel, the only solid fuel used, and a number of trains had to be cancelled from time to time as the inevitable consequence.

Despite these handicaps the revenue earned, $1,251,016 ($968,207), was again a record; in brackets are given the corresponding figures for the previous year. Expenditure totalled $998,156 ($703,855). Traffic receipts from passengers and goods were $582,737 ($384,972) and $604,870 ($520,912) respectively.

LETTERS TO THE EDITOR

(*The Editor is not responsible for opinions of correspondents*)

Availability of Season Tickets

June 15

SIR,—Mr. L. G. Jennings' letter in your June 12 issue on the availability of season tickets from stations north of Finsbury Park to Kings Cross gave me a rude shock, as I feared I had been defrauding either the L.N.E.R. or London Transport for some 30 years.

On examining my current season ticket, bought on April 21, 1953, I find, however, that it is marked—admittedly in small type—"Available also between Finsbury Park and Kings Cross (*via* Arsenal)," so I am, perhaps only temporarily, still honest.

Yours faithfully,

J. H. MASTERS

39, Elmwood, Welwyn Garden City

British Railways Timetables

June 15

SIR,—I have followed this correspondence with interest, and would like to add two points for consideration.

At present only regional timetables are generally available, and these are fairly bulky volumes, the London Midland and Southern especially. Their size and weight are not likely to lead to their being carried in the pocket or in a handbag. If smaller local timetables were available on the lines of those issued by the L.N.E.R. in prewar days, many more people might carry them and consequently know when convenient trains are available. Such timetables should contain fairly extensive lists of the cheap fares available, to publicise them more widely. In this area, where many rail fares cost less than the corresponding fares by road, there are still many people who never give the trains a thought but readily queue to stand, perhaps, on a bus. Regular interval services of approximately the same frequency are in force with each form of transport.

In mid-March, I wrote for a copy of the British Railways summer *Continental Handbook*, and was told that a copy would be sent as soon as available. As nothing has so far reached me I assume that the summer issue is not yet ready. The value of this publication to the public is therefore doubtful, considering that in these days most people arrange their holidays abroad during March or April at the latest. In addition, most Continental railways began their summer services in May, while our own have now been in force a week. The *Handbook* must be an expensive item to produce, and is distributed free. As it is at present, considerable economies might be achieved by suspending publication, at the same time causing comparatively little inconvenience to those travelling abroad, who must, in any case, rely on some other publication for advance information. The saving might go a considerable way towards subsidising the publication of local timetables.

Yours faithfully,

P. W. B. SEMMENS

52, Belle Vue Grove, Middlesbrough

Caledonian Railway No. 123

June 22

SIR,—The Press has been inspired to announce that the grand old locomotive Caledonian Railway No. 123, a worthy successor to the singles built by Allan and Connor in 1859 and 1876, and now on show at Battersea Wharf, was used exclusively as a pilot engine for Royal trains.

This is by no means the case. I have seen No. 123 haul Glasgow-Clyde Coast trains and often the "Officers Special," as well as on other duties.

Might I suggest to the British Transport Commission that instead of rusticating in the York Museum or appearing at shows in Battersea, this fine engine be given a niche at Glasgow Central Station whence it operated so long and so honourably.

Yours faithfully,

ANDREW HASTIE

Caledonian Club, S.W.1

[Any "inspiration" of the Press as to the engine being exclusively a Royal pilot engine was not derived from the British Transport Commission, which has organised the exhibition. The locomotive has been preserved at St. Rollox Works, Glasgow, not in York Museum.—ED., *R.G.*]

THE SCRAP HEAP

What's in a Name?

A man in trade says, "the general popularity of motorcoach travel increases each year." And this is irrespective of the comparative cost of railway travel. Coach-owners insist upon more and more comfortable and better equipped vehicles and today some of them cost more than £4,500. Nobody ever calls them charabancs—or, as Lytham St. Annes insisted, *chars-à-bancs.—From "The Manchester Guardian."*

Passenger Comfort

It would be difficult to devise a vehicle more comfortable than the modern British Railways (or L.M.S. or L.N.E.) corridor carriage, either first or third class. We have little to learn in this respect from our Continental neighbours, judging from my own recent experience of French, Italian, and German trains. In a road coach, on the other hand, there is seldom enough room for one's legs and it is almost invariably crowded.—*From a letter to "The Times."*

Postcards of Railway Vessels

The attractive view reproduced below of the British Railways mv. *Swan* on Lake Windermere appears on a postcard produced by the L.M.R. Public Relations & Publicity Department for sale in the vessel. There are similar cards of the mv. *Teal*, and of the *Hibernia* and *Cambria* operating on the Holyhead-Dun Laoghaire route. Early in the century the former London & North Western Railway contributed on a considerable scale to the postcard collections of the period with views of trains and scenery. Between the wars, amateur photography and the snapshot album tended to push the postcard album into the background, but an urge to buy a postcard of the ship in which he has sailed still grips many a British holidaymaker. The London Midland Region deserves to profit in the same way as its predecessor from this harmless manifestation of the nautical spirit.

Royal Reactions to Speed

A period when speed was looked at askance in high places is recalled by some of the items displayed at the "Royal Journey" Exhibition at Battersea Wharf (see news article this week). A letter from Osborne in the exhibition from Queen Victoria's equerry, the Hon. Alexander Gordon, complains that a railway director had given "the gratuitous piece of information, which very naturally alarmed her Majesty, although it was probably incorrect," that on one journey the train had been "driven at the rate of 60 miles an hour." The letter said that on no account, in future, was the speed of the Royal train to be increased to make up lost time.

A more drastic expression of displeasure is recalled by a yellow silk notice of a Shah of Persia's journey from Victoria to Portsmouth in July, 1873. The Shah was alarmed by the speed of the train. As soon as he set foot on the platform he demanded the immediate execution of the driver.

Titfield, Herts

Mr. J. W. Fowler, a Willesden printer, has been a light railway enthusiast for 30 years.

Now at 57 he has a scheme which, he hopes, will put him on the footplate within six months and give London Transport "something to think about."

His plan is to open a light railway from Elstree village to Finchley Central, and cut to fifteen minutes the journey which now takes an hour by bus.

The "Finchley Flier," says Mr. Fowler, will probably be made up of old Liverpool trams. There would be no signals, stations or station staff. The train would halt as the driver wished.

The residents of Elstree village, Edgware and Finchley want the railway. Mr. Fowler says they are being backed by M.P.s and borough councillors.

London Transport officials have said one obstacle was that the proposed route was their property. So far London Transport have had no hint from Mr. Fowler that he wants to negotiate for the site.—*From "The Evening News."*

Expensive Dog Passenger

On the ground that he was denied access to the baggage van of a transcontinental express to feed and water his dog, which was found dead at the end of the journey, a resident of California is suing the railway authorities for the alleged value, $600,000. The dog, a trained fox terrier, is described as "the wonder dog of Europe."

Train Fever

("*. . . the disease that makes people get to stations long before they need to.*"—*"Daily Express"*)

I must be there in good time today,
The train leaves at ten to two;
Let's see—if I get there at half-past ten
Surely that ought to do.

Or is that running it rather fine?
My taxi might break down,
Or fog descend on my local line,
Delaying my trip to Town.

I can't wait patiently at home
Or place my trust for long
In other people's efficiency—
Anything might go wrong!

I'd rather sit on the long, hard seats
And enjoy the cheerful strains
Of the hidden music and dulcet tones
Of She Who Announces Trains.

No military master-mind
Plotted a great campaign
With more attention to "ifs" and "buts"
Than I when I go by train.

The stationmaster knows me now
And kindly arranges, too,
To give me the tip every hour or so,
In time for the "ten to two."

For there *was one catastrophic* time,
When I slept on and on,
And the sun had set and the stars were out
When I woke—and my train had gone!

Good gracious! It's after nine o'clock,
It's time I was on my way;
The train leaves at ten to two, you know,
And I mustn't be late today.

A. B.

A view of the British Railways motor vessel "Swan" on Lake Windermere, now appearing on a postcard produced by the L.M.R. Public Relations & Publicity Department

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

INDIA

Bombay Railway Signal & Telecommunication Society

At a meeting of the Bombay Railway Signal & Telecommunication Society on June 12, papers were read on the Central Railway Administrative Trunk Telephone, by Mr. T. Ramo Rao, and on lubrication for signalling and interlocking apparatus by Mr. H. D. Khanna. About 70 members were present; Mr. H. C. Towers, Chief Signal & Telecommunication Engineer, Western Railway, Bombay, presided. The Society recently has been affiliated to the Institution of Railway Signal Engineers, London.

Indian Telegraph Department

The Indian Telegraph Department will celebrate its centenary next October, an event closely following the centenary of Indian railways. Exhibitions showing the development of the Indian telegraph system will be held at Delhi, Calcutta, Madras, and Bombay; it is also proposed to hold a telegraph convention in Delhi.

The first experimental telegraph line was laid from Calcutta towards Diamond Harbour in 1839, but not until October, 1851, was the first telegraph line opened for traffic between Calcutta and Diamond Harbour. In November, 1853, the construction of a long-distance overhead line was begun between Calcutta and Agra; the first message was sent in March, 1854.

Extension and development of telegraphs have been bound up with those of the railways; and staff of the Telegraph Department have been attached to the railways for service in railway telegraph departments.

CANADA

New C.P.R. Suburban Stock

The first of a $4,000,000 order for 40 lightweight steel coaches for Canadian Pacific Railway Montreal suburban service has been completed by the Canadian Car & Foundry Company. The coach seats 103 passengers in plastic-covered, sponge-rubber seats and has 3 ft. wide gangways and doors for rapid entrance and exit. It is expected that the first train completely equipped with the new stock will be in operation within a few weeks. The coaches will replace both wooden and steel 76-seat coaches. Equipped with roller bearings, they will enable trains to accelerate more rapidly from the many stations along the Montreal-Rigaud route.

Point St. Charles Shops Centenary

The Canadian National Railways workshops at Point St. Charles celebrates its 100th anniversary this year. The shops had their beginning in Longueuil, where they were built in 1853 by the Grand Trunk Railway to service the locomotives and cars of the St. Lawrence & Atlantic Railway which it had absorbed that year. In four years the growing size and number of locomotives necessitated the enlargement of the shops and at the same time they were transferred to the present site at Point St. Charles where they could also service Grand Trunk locomotives and rolling stock on the then new Montreal-Toronto line.

In 1883 an iron foundry and in 1887 a pattern shop store and mess room were added. In 1891, a rolling mill was erected and the erecting shop, boiler shop, smith shop and the machine shop were extended. The enlargement of the workshops continues. In 1950 modern wheel and signal repair shops were completed and now it is planned to double the size of the electric shop to service the growing diesel-electric fleet.

BRAZIL

Leopoldina Subsidy

President Vargas has authorised a monthly subsidy of 20,000,000 cruzeiros (£400,000) to the Leopoldina Railway "to enable it to overcome the difficulties now confronting it."

Imports

Between 1951 and 1952 imports of locomotives increased from 72 to 180; diesel motors, exclusive of those for motor vehicles, from 8,414 to 9,098 tons; rails and accessories, from 5,972 to 9,309 tons. Imports of railway wagons dropped from 99 to 37 units and accessories for wagons, from 5,038 to 3,885 tons. Imports from Great Britain included locomotives and wagons, 1,711 tons, valued at £1,295,121; diesel motors, 4,557 tons and £2,110,620; electric signalling apparatus, £55,838. The National Railway Department has approved plans to re-equip the Leste Brasiliero at a cost of £1,765,000. Ten 1,000-h.p. diesel-electric locomotives will be imported.

The investment plan, drawn up by the Minister of Transports, allocates 70,000,000 cruzeiros (£1,400,000) for purchase of rolling stock, including locomotives and steel wagons, for eleven of the smaller Brazilian railways.

UNITED STATES

Locomotive Pooling System

The Great Northern Railway is giving serious consideration to a scheme whereby railways, the G.N.R. included, which have considerable seasonal variations in their traffic—as, for example, those which serve the wheat belt—would have a pool of diesel locomotives from which to draw at times of traffic pressure. To make the plan effective, it is obvious that the railways so associated would have to be those whose maximum seasonal demands are at

Electrically-hauled Steam Locomotive and Train

Bo-Bo electric locomotive with through express entering Brussels Nord Station, on the Brussels Junction Line, Belgian National Railways. Steam locomotives, running with regulator shut, are hauled by electric engines over the line, which is largely in tunnel

different periods of the year. Meantime the Great Northern, though a diesel user on a considerable scale, is not considering complete dieselisation, for this would mean that at the slacker periods a number of its diesels would be uneconomically idle; for the time being its remaining stock of steam locomotives will be put into service when peak traffic exceeds the capacity of its diesels.

Studying the Woman Passenger

The Chicago & North Western has appointed a special woman representative who is to spend 90 per cent of her time riding on the company's passenger trains and reporting on the quality of service that they are giving from the woman's point of view. She will confer with conductors, dining car stewards, waiters, chefs, porters, and other train personnel, as well as with passengers, and will be expected to make suggestions for any refinement of service which she thinks will benefit the ordinary passenger.

FRANCE

Apparatus for Straightening Headstocks

An apparatus for straightening bent headstocks has been designed by a S.N.C.F. employee at Mezidon Workshops. The device is in the form of an isosceles triangle, whose apex is curved to fit securely against the rounded surface of the buffer casing. From the base protrudes a similar curved portion which is adjustable and can be moved outwards and inwards by a 25-ton hydraulic jack situated inside the triangle. The triangle is placed between the two buffers so that the two curved portions rest against the respective buffer casings. The working of the jack produces the effort required to straighten the headstock. In case of difficulty, heat applied to the buckled part of the headstock will ensure the desired result.

Road-Rail Trailer Centre

An important centre for handling road-rail trailers is being developed by the S.N.C.F. at Mézières-Charleville. This is an important industrial centre and with the co-operation of a road transport subsidiary successful efforts are being made to compete for traffic with long-distance road haulage. The traffic began to pass in October, 1952, and up to the end of February last some 180 trailers had been despatched conveying over 1,200 tons of freight.

IRELAND

"Enterprise" Express

On and from June 29, the Dublin-Cork express services will be operated by diesel train. The through working of the "Enterprise" between Belfast and Cork will therefore cease on June 27, but to retain some semblance of what has been the longest through run in the history of Irish railways, a through coach between Belfast and Cork will work on the 10.30 a.m. "Enterprise" from Belfast and the 1.15 p.m. "Enterprise" from Cork. These vehicles are to be provided by C.I.E. and will accommodate twelve first class and 32 third class passengers, with luggage compartment.

The through Belfast-Cork coach will be marshalled in the rear of the 10.30 a.m. up G.N.R. express from Belfast and in front of the 5.30 p.m. down express from Amiens Street to Belfast. The 1.30 p.m. C.I.E. diesel train will continue to run from Amiens Street to Cork and the through coach from the 10.30 a.m. from Belfast will be transferred by the leading C.I.E. power unit.

In the reverse direction the 1.15 p.m. C.I.E. diesel from Cork will arrive at the loop line and the through coach for Belfast will be transferred by G.N.R. engine to the front of the 5.30 p.m. "Enterprise."

The G.N.R. introduced its first "Enterprise" non-stop express between Belfast and Dublin on August 11, 1947, and on October 2, 1950, the through "Enterprise" service to Cork was introduced in co-operation with C.I.E. Deducting the time for stops at Dublin and Limerick Junction, the running time for the 282 miles by "Enterprise" from Belfast to Cork was just under six hours.

Publications Received

Central Railway (India) Magazine: Centenary Special Number. Published at the Western Railway Headquarters, Churchgate, Bombay. Price Rs. 1—8 as. —This well-produced illustrated publication covers a wide field, including the history of the Central Railway and its constituents from the opening of the first section of the G.I.P.R. in April, 1853. There is emphasis on main-line and suburban electrification, and on the various tourist attractions, of which there are excellent pictures. Also included are articles on bridges, hill railways, "A Century of Chief Engineers," "A Century of Central Locomotives," coaching stock and air-conditioning and signalling.

Canada. London: Department of Industrial Development, Canadian Pacific Railway, Trafalgar Square, W.C.2. 9¼ in. × 6½ in. 24 pp. Illustrated. Gratis.—The key to this booklet is given by its sub-title: "a land of opportunity and a great market for British merchandise." It explains how the Department of Industrial Development of the C.P.R. can assist British enterprise in investigating and developing the natural resources of the Dominion. Enquiries are treated in confidence, and advice is given without local prejudice and free of charge, on such subjects as the establishment of branches and introductions to reliable Canadian agents. The country as a whole and all its provinces individually are described, with their climate, population, local industries and other conditions. Despite the natural geographical tendency for Canadian life to be influenced by the United States, and although in the past some British traders have ignored Canadian requirements and wishes, there is a strong preference throughout the Dominion for things British. Commission agents, joint representation of British firms, sales visits, manufacturing arrangements on a royalty basis, and advertising, are among the other subjects covered.

Journal of Transport History. Vol. I, No. 1 (May, 1953). Leicester: University College. Edited by Professor Jack Simmonds and R. M. Robbins. 9¾ in. × 7¼ in. 64 pp.—This is the first issue of a new journal which is to appear twice a year and will publish articles and reviews on the history of all forms of transport. The names of the joint authors are ample guarantee of its quality. It will give expression to the growing interest in transport history, stimulated by the opening to students of the archives of the British Transport Commission, and will offer common ground for professional historians and transport men alike. The first number is agreeably diverse in contents: Mr. H. J. Dyos writes on workmen's fares in South London up to 1914, there is the first part of an article by Mr. Charles E. Lee on Train's street tramways in this country, Mr. Robbins describes the little-known Balaklava railway laid down to serve the British army in the Crimean War, and Mr. Charles Hadfield takes as his subject James Green and his canals in the south-west of England. Six pages are devoted to book reviews. A most useful feature to the student is a bibliography of publications on the history of transport in British periodicals in 1950-51. The journal sells at 10s. a copy, and the annual subscription is 18s.

Copper Tubes for Gas Services.—The use of copper tubing for the conveyance of gas from the motor to its point of consumption is now established practice. A booklet issued by Imperial Chemical Industries Limited gives details of copper tubes used for those services, for either underground or above-ground installation.

Firth-Vickers Stainless and Heat-Resisting Steels.—In the latest issue, *Enchiridion* (No. 5), Firth-Vickers Stainless Steels Limited gives some of the more recent applications of Staybrite steel, which include components of Davies & Metcalfe exhaust steam injectors, kitchen compartments of various overseas railways rolling stock, automatic signalling installations manufactured by the Westinghouse Brake & Signal Co. Ltd., cafeteria equipment, and others. Information as to the method of heat-treatment of stainless steels to avoid intercrystalline corrosion is also included.

British Transport Commission Results for 1952

Revenue surplus increased and accumulated deficit reduced : increases in charges necessitated by rising costs towards the end of the year

THE fifth annual report of the British Transport Commission, submitted to the Minister of Transport by the Chairman, Lord Hurcomb, shows that for the year 1952 the Commission's operations, despite many adverse circumstances, resulted in a surplus of £8·4 million, against £2·9 million in 1951. Describing the period as one of unsettlement and difficulty, the report states that the policy of the present Government, as outlined in the White Paper of May, 1952, brought to a halt various schemes to rationalise the internal transport system and to realise major economies.

During its first five years the Commission had earned a working surplus of £221·3 million, from which must be deducted central charges for interest and administration amounting to £238·8 million, leaving a deficit for the five years of £17·5 million. After adding charges for capital redemption and special items and deducting recoverable expenditure, the adverse balance on net revenue account, mostly accumulated in 1949 and early in 1950, has been reduced to £31·5 million. Nearly one half of this is represented by capital redemption. In comparison, the total revenue receipts for the five years were £2,860 million, and taking one year with another there has been fairly close budgeting.

The individual working surpluses of the several activities are as follows:—

	Net receipts or (deficit) *i.e.*, gross receipts less working expenses, 1952 £ million	Better (+) or worse (−) than 1951, by £ million
Principal Carrying Activities:		
British Railways (including C. & D. services) ...	37·0	+ 5·3
British Road Services ...	1·6	− 1·6
Provincial & Scottish buses	3·8	no change
London Transport—Road	(0·3)	+ 1·8
,, ,, Rail ...	1·3	+ 0·7
Ships	1·9	− 1·0
Inland waterways (carrying)	(0·1)	no change
	£45·2	+£5·2
Other Principal Activities, including docks and hotels	5·4	+ 1·6
Miscellaneous activities ...	3·9	− 0·4
Interest and miscellaneous receipts	1·2	+ 0·2
	£55·7	+£6·6
Deduct : Interest, administration, and other central charges	47·3	− 1·1 (incr.)
Surplus of revenue receipts over expenditure for 1952	£8·4	+£5·5
Less : capital redemption and special items ...	3·9	− 1·1 (incr.)
Surplus	£4·5	+£4·4

Analysing the adverse tendencies in 1952, the report states that coal and steel costs rose at the beginning of the year by an annual equivalent of £7½ million. The Transport Tribunal judgment on passenger fares allowed about £4 million less annually than had been applied for; the increased fuel tax cost about £5½ million a year; and the annual yield of the passenger charges scheme was further reduced by £1·9 million through Government intervention. None of these actions, it is stated, could be controlled by the Commission or be wholly offset by increased economy and efficiency. The adverse effect on revenue is stressed of the time-lag in introducing increases in charges.

Effect of Wage Increases

Nevertheless, with the help of improving results from many parts of its undertaking, there still was a prospect in the early autumn of 1952, that the B.T.C. would be able to complete the year with its revenue account in balance and perhaps also hold the future under reasonable control. The fresh wave of wages increases in the last few months of the year finally unbalanced the Commission budget, which had to seek the only

BRITISH TRANSPORT COMMISSION : CONSOLIDATED BALANCE SHEET AT DECEMBER 31, 1952

December 31, 1951 £		£	£	December 31, 1951 £		£	£
	Current Liabilities				**Current Assets**		
64,245,765	Creditors and accrued expenses (including £3,175,000 due to a subsidiary company)	62,196,834		84,013,122	Bank balances, Treasury bills, deposits at short call and cash ...	47,944,428	
6,313,713	Consideration for undertakings acquired payable in cash (estimated)	2,924,037		—	Balance receivable on issue of British Transport Stock (since received)...	24,466,961	
11,036,239	Interest (less income tax) accrued on capital liabilities	11,407,326		8,467,041 59,234,141	Marketable securities (market value £17,080,875)	17,113,916	
18,475,173	Taxation			12,445,910	Outstanding traffic accounts... ...	63,673,448	
100,070,890			76,528,197	87,127,159	Other debtors and payments in advance	12,573,361	
				251,287,373	Stores and materials	105,008,742	
							270,780,856
41,100,333	**Deposits**						
79,179,311	By staff savings banks	41,326,134			**Investments in respect of British Transport Stock Redemption Fund**		
	By staff superannuation funds ...	83,583,546			**Accounts** (market value £13,671,522)		13,694,869
120,279,644			124,909,680	10,661,287			
89,513,167	**Provisions**				**Fixed Assets and Goodwill** on bases indicated in supporting statements and notes on accounts		
	For abnormal maintenance	67,454,470			Interests in non-controlled undertakings	9,990,161	
106,943,723	For pre-vesting actuarial deficiencies of guaranteed superannuation funds	105,567,902		10,005,151	Interests in subsidiary companies not engaged in the principal activities of the Commission ...	1,987,201	
—	For taxation	19,911,592			Rolling stock, vehicles, £		
21,750,551	Other provisions	20,930,291		2,263,004	ships, and plant and equipment 817,927,680		
218,207,441			213,864,255		*Deduct* depreciation accrued to date 424,698,665		
438,557,975			415,302,132	797,198,002		393,229,015	
	Capital Liabilities			415,372,990			
	Loan from London Electric Transport Finance Corporation Limited (repayable 1950/55)	40,160,040		381,825,012	Land, buildings, permanent way, docks, canals, and other works (*Renewals of these assets are dealt with as revenue charges*)	998,063,357	
40,160,040	Obligations to local authorities in respect of the redemption of loans	874,118			Goodwill	63,973,870	
928,155	Consideration for undertakings acquired to be satisfied by the issue of British Transport Stock (estimated)	9,599,272		988,596,325 64,244,443			1,467,243,604
14,362,753	British Transport Stock	1,311,171,141		1,446,933,935			
1,245,114,366							
1,300,565,314			1,361,804,571		**Discounts less premiums on issue of British Transport Stock, less** amounts written off		7,783,689
10,738,472	**Capital Redemption Accounts** ...		13,879,268	1,515,355	**Net Revenue Account**—balance (deficit) at December 31, 1952 ...		13,482,953
				39,463,811			
1,749,861,761			1,790,985,971	1,749,861,761			1,790,985,971

Note.—Estimated further expenditure on Capital Account authorised at December 31, 1952: £130,000,000

HURCOMB, *Chairman*
J. BENSTEAD, *Deputy Chairman*
REGINALD WILSON, *Comptroller*

CONSOLIDATED WORKING RESULTS OF PRINCIPAL ACTIVITIES OTHER THAN CARRYING

—	Docks, harbours, and wharves	Inland waterways: other than carrying operations	Hotels and catering			Commercial advertising	Letting of sites, shops, etc., on premises and properties in use for transport purposes	Grand total
			Hotels	Refreshment rooms	Restaurant cars			
	£	£	£	£	£	£	£	£
Gross receipts	16,855,396	1,940,999	5,782,087	7,880,643	2,951,874	2,741,565	1,585,360	39,737,924
Working expenses (including depreciation or renewals but after deducting abnormal maintenance)	14,457,004	2,063,583	5,739,656	7,565,208	3,423,664	883,261	216,724	34,349,100
Net receipts	2,398,392	122,584 (deficit)	42,431	315,435	471,790 (deficit)	1,858,304	1,368,636	5,388,824
Year 1951								
Gross receipts	14,867,486	1,761,035	6,046,202	7,213,217	3,094,462	2,967,992	1,513,339	37,463,733
Working expenses	14,050,245	1,947,487	6,011,650	6,884,203	3,730,942	844,616	200,217	33,669,360
Net receipts	817,241	186,452 (deficit)	34,552	329,014	636,480 (deficit)	2,123,376	1,313,122	3,794,373

remedy available. Increases in passenger fares and freight charges therefore were inevitable.

"Make-do-and-Mend"

Describing the policy of "make-do-and-mend" necessitated by the limitations on capital investment and use of materials has enforced on the Commission, as harmful to efficiency and economy, the report reveals that the steel shortage compelled the railways to resort again to the wasteful practice of repairing coaches 40-50 years old so as to accommodate peak summer traffics. Since 1949 almost £600,000 has been spent on such repairs, though this has given old stock an extension of life averaging only four years. Similarly, it has been necessary to patch up condemned wagons, with serious effect on operating efficiency, including train speeds.

Reorganisation of Railways

Reference is made to the B.T.C. announcement in 1948 that the organisation adopted at nationalisation, "requisite in laying the foundation of a unified railway service," would be reviewed and if necessary revised after two or three years' experience. The difficulties of the winter of 1950 delayed this, but by the end of 1951, the Commission was ready for a simpler form of organisation. Without sacrificing the advantages of central control of certain essentials, further devolution to the Regions were to follow, and development of a road/rail freight service under a single commercial management. Proposals were submitted to the Minister at the end of 1951, but, the report states, no consultations with the Commission took place, and in May, 1952, the White Paper forecast legislation to dispose of nationalised road haulage assets and decentralise the railways. The report does not otherwise refer to the provisions of the Transport Bill, which was under discussion in Parliament at the end of the year, and became law on May 6 last.

Disappointingly Small Surplus

The 1952 surplus before capital redemption and special items is described as disappointing, being only some 0·7 per cent of gross receipts. A better rate of surplus was earned during the first nine months; during the remainder of 1952, operations were being conducted at a loss. The Tribunal decision on the application for some increase in fares which had become inevitable was still awaited on May 12 when the annual accounts were completed; hence the budgetary unbalance occasioned in the autumn of 1952.

The total yield from all activities in 1952 actually exceeded the central financial requirements, which at present consist mainly of interest and redemption charges, but which soon must allow for building up reserves, and so on. Towards these central charges London Transport is said to have made "no reasonable contribution," while British Railways made "a reasonably good" one, though their working surplus seems below the standard yield which would have been thought proper in 1927 when the "standard railway revenue" of the combined railway companies was first fixed.

British Road Services

The report refers particularly to the financial results of British Road Services over their brief life of five years. The working surplus totalled £8 million. The report states that when allowance is made for many items resulting from the peculiar circumstances in which British Road Services started and have functioned, the sum total of their financial performance "certainly cannot be said to prove failure or inefficiency." British Road Services moreover have aimed at providing a comprehensive public service. The continued growth of "C"-licence transport is said to have been much misunderstood and to reflect the trend experienced in the principal European countries.

Passenger and Freight Traffics

For the Commission's passenger services as a whole, gross receipts were 7·5 per cent higher than for 1951, and total passenger journeys decreased by 168 million, but the net fall in passenger miles was negligible. This stability of traffics, with fare increases, produced a substantial increase in revenue, though the effect of the 10 per cent. increase in British Railways monthly return fares at the start of the year was largely offset by the reduction made by the Transport Tribunal in the level of the standard ordinary fare from 2·44d. to 1·75d. a mile. The total volume of passenger travel seems to have been affected in the main by the absence of special traffics as for the 1951 Festival, by less spending on entertainment, and by bad weather. The proportion of first-class passengers continued to decline, but still produced one-tenth of all passenger takings on British Railways.

Passenger loadings were much the same as in 1951, but since 1945 there has been a steady decline, explained by the provision of better services to cut down peak-period queues, the fall in off-peak travel as the abnormalities of postwar life diminish, and more private motoring. This return to the prewar pattern of loadings, especially if further integration is not to be attempted, may cause the cost per passenger mile to rise.

Freight tonnages in total were slightly lower than in 1951, an increase in raw materials carried being more than offset

BRITISH RAILWAYS WORKING RESULTS YEAR 1952

Year 1951 £		£
	Gross receipts:	
	Passenger train—	
	Passengers	
89,634,381	Ordinary	93,030,327
6,197,468	Early morning tickets and workmen ...	6,750,743
11,190,658	Season	12,100,226
107,022,507		111,881,296
24,749,135	Parcels and other merchandise	26,472,255
8,302,392	Mails and parcels post ...	9,532,425
140,074,034		147,885,976
	Freight train—	
98,220,699	Merchandise	104,400,314
36,761,250	Minerals (Classes 1 to 6)	42,193,370
91,319,800	Coal and coke	101,680,167
1,556,081	Livestock	2,262,882
227,857,830		250,536,733
4,791,098	Miscellaneous	4,935,173
372,722,962	Total	403,357,882
	Working expenses (including depreciation or renewals but after deducting abnormal maintenance)—	
120,765,613	Train and vehicle operating costs	129,726,355
69,017,963	Maintenance and depreciation of rolling stock ...	75,097,213
83,846,688	Other traffic costs ...	90,203,846
53,129,408	Maintenance and renewal of way and structures ...	56,975,464
11,010,149	General expenses ...	11,753,307
337,769,821	Total	363,756,185
34,953,141	Net traffic receipts ...	39,601,697

CONSOLIDATED WORKING RESULTS OF PRINCIPAL CARRYING ACTIVITIES

—	Railway passenger and freight services of British Railways		Collection and delivery and other road services of British Railways		Road haulage by British Road Services		Road passenger services of provincial and Scottish groups		London Transport services			Ships : passenger and cargo services of British Railways		Inland Waterways : carrying operations		Grand total
									Road services	Railways						
	£		£		£		£		£	£		£		£		£
Gross receipts :																
Passengers	111,881,296		—		—		47,950,599		48,695,210	17,969,125		5,479,853		—		231,976,083
Freight, parcels, and mails	286,541,413		11,314,089		76,015,344		—		—	—		6,141,779		902,987		380,915,612
Miscellaneous	4,935,173		3,558		1,552,079		257,948		2,022	430,834		545,530		11,230		7,738,374
Total	403,357,882		11,317,647		77,567,423		48,208,547		48,697,232	18,399,959		12,167,162		914,217		620,630,069
Percentage of grand total—Year 1952 ...	65		2		12		8		8	3		2		—		100
Year 1951 ...	64		2		14		8		7	3		2		—		100
	£	Per cent.	£	Per cent.	£	Per cent.	£	Per cent.	£	£	Per cent.	£	Per cent.	£	Per cent.	£	Per cent.
Working expenses (including depreciation or renewals but after deducting abnormal maintenance) :																
(a) Train, vehicle, and ship operating costs	129,726,355	36	10,106,888	57	39,170,586	52	27,820,199	63	29,173,567	5,790,815	34	4,325,683	42	259,534	27	246,373,627	42
(b) Maintenance and depreciation of rolling stock and ships	75,097,213	20	3,719,939	21	17,437,991	23	9,083,447	20	9,700,391	3,006,876	18	1,903,601	19	178,689	18	120,128,147	21
(c) Other traffic costs	90,203,846	25	1,288,791	7	6,465,219	8	3,832,315	9	5,757,718	3,809,192	22	3,312,352	32	7,766	1	114,677,199	20
(d) Maintenance and renewal of way and structures ...	56,975,464	16	88,415	1	488,087	1	723,865	2	1,098,495	3,442,474	20	9,998	—	—	—	62,826,798	11
(e) Vehicle licence duties and inland waterway tolls	—	—	492,602	3	1,847,224	2	994,466	2	886,956	—	—	—	—	192,338	20	4,413,586	1
(f) General expenses	11,753,307	3	2,020,831	11	10,518,593	14	1,922,826	4	2,388,074	1,090,596	6	730,135	7	335,342	34	30,759,704	5
			17,717,466	100												579,179,061	100
Deduct :																
(g) Cartage charged to other activities			3,816,926													3,816,926
Total	363,756,185	100	13,900,540		75,927,700	100	44,377,118	100	49,005,201	17,139,953	100	10,281,769	100	973,669	100	575,362,135
Net traffic receipts	39,601,697		2,582,893 (deficit)		1,639,723		3,831,429		307,969 (deficit)	1,260,006		1,885,393		59,452 (deficit)		45,267,934
Operating ratio : percentage of working expenses to gross receipts	90		123		98		92		101	93		85		107		93
Year 1951																
Gross receipts	372,722,962		10,563,030		78,577,240		43,898,591		43,389,723	16,522,027		12,572,846		806,934		579,053,353
Working expenses	337,769,821		13,873,516		75,330,651		40,044,718		45,485,613	15,976,190		9,695,813		895,214		539,071,536
Net traffic receipts	34,953,141		3,310,486 (deficit)		3,246,589		3,853,873		2,095,890 (deficit)	545,837		2,877,033		88,280 (deficit)		39,981,817
Operating ratio : percentage of working expenses to gross receipts	91		131		96		91		105	97		77		111		93

NOTE.—The classification of working expenses under the six main heads shown above, while broadly uniform, differs to some extent for the various principal activities shown

by a decrease in manufactured goods. Gross receipts from freight in 1952 were 7·3 per cent more than in 1951.

Charges

British Railways fares at the end of November, 1952, were 90 per cent. over prewar, against increases in wages and price levels of 160 per cent; and London Transport fares at about 63 per cent over prewar, against cost level increases of 130 per cent. Before the increases of December 1, 1952, railway freight charges on a weighted average were about 119 per cent. over prewar.

With passenger fares, the gap is explained chiefly by better loadings, by increased travel, by renewals not being provided for on the same basis as prewar, and by the greatly diminished remuneration of capital. With freight charges, the gap is attributable largely to heavier traffics and greater efficiency and economy.

Greater Operating Efficiency

Increased operating efficiency is shown in the statistics for British Railways and British Road Services.

Although the total train miles run by the former in 1952 was the same as in 1951, total engine miles and the total engine hours were lower. The total efficiency of freight operation is best reflected, the report states, in the statistic known as "net ton miles per total engine hour in traffic," which has improved steadily in the last five years from 547 to 605, compared with 461 in 1938. The estimated average load per passenger train in 1952 was 91 passengers, compared with about 70 in 1938.

For British Road Services an all-round increase in efficiency is illustrated by higher mileage per vehicle at work and per total of men constituting vehicle crews, only obtained, the report explains, by organisation of the services on a large scale.

Improved Docks Results

Reporting on its other, non-carrying activities, the Commission shows on the whole an all-round improvement, especially in the financial results of the docks, though fish docks generally worked at a loss because authorised charges were totally inadequate to cover costs. Despite an increase of 7·8 per cent in the tonnage of cargoes handled, operation expenses increased by only £26,000; this arises from operational economies and fuller use of labour and equipment. Approval has been given to many schemes for improving mechanical and other engineering equipment at several docks.

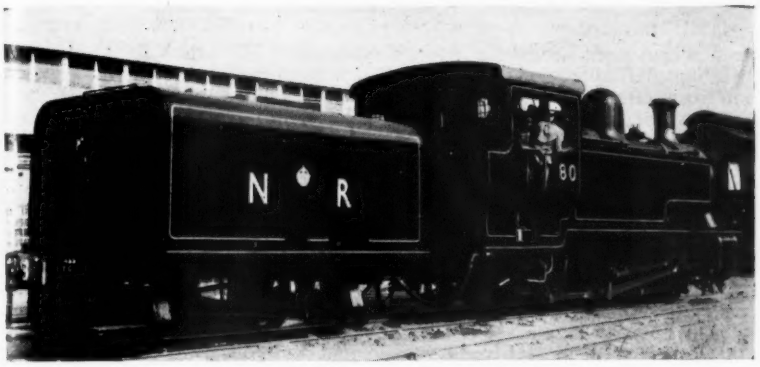
Hotels and Catering

Mainly because of economies in working and continued eliminating of unremunerative establishments and ancillary services, the hotels and catering realised further financial improvement. Schemes for substantial improvement of hotels were approved, also the building

(*Continued on page* 733)

Nigerian Tank Locomotive with Auxiliary Tender

Additional fuel supply to increase availability



Front tank of Beyer-Garratt locomotive converted for attachment to a 0–8–0 *shunting engine of the Nigerian Railway*

THE Nigerian Railway began an experiment of considerable interest in February when an 0-8-0 shunting engine was provided with an auxiliary tender having a capacity of one ton of coal and 1,830 gal. water. The engine has side tanks with a capacity of 1,000 gal. and a bunker holding two tons of coal. The auxiliary tender consists of a front tank from a condemned Beyer-Garratt mounted on the underframe of a standard 10-ton four-wheel wagon suitably strengthened. Connection between the engine and the tender is by a standard ABC buffer coupling and stops have been provided in the locking bars to prevent uncoupling and consequent damage to tender feed pipes. Electric lights have been fitted to the front of the engine and back of tender and a platform is situated between the rear end of the tank and the end of the underframe with steps on each side for the use of shunters.

Continuous 16-Hour Service

In practice it has been found that it is possible to keep this engine continuously in service for 16 hr. As it is necessary to provide a definite period for cleaning fires, oiling and examination of the engine it has been decided to allow the engine to proceed to the pit 30 min. before the end of each shift thus saving the mid-shift 30 min. visit which was necessary before the auxiliary tank was fitted. The possibility of increasing the water capacity of the auxiliary tender by reducing the bunker capacity is now under consideration. The operating advantages of having a shunting engine continuously in service for 7½ hr. are considerable and it is intended to equip other shunting locomotives.

British Transport Commission Results for 1952

(*Concluded from page* 732)

of 50 railway cafeteria cars, in fulfilment of the policy of finding new means of catering for long-distance passengers at reduced cost.

The gross receipts from commercial advertising declined somewhat, mostly referable to advertising on the properties and fleets operated by London Transport.

Central administration charges and the cost of the common services were reduced in 1952. The charge for interest, however, rose substantially.

Railway Developments

Major developments on British Railways in 1952 referred to in the report include opening of the first section of the Manchester-Sheffield-Wath electrification, the new power signalling at Euston, experiments in A.T.C. in the Eastern Region, the plans for construction of diesel shunting locomotives and of diesel passenger train sets for inter-urban services.

Devolution of Authority to Regions

Though no important alteration took place in the general organisation since January, 1948, there was increased devolution of authority to Regions. The Chief Regional Officers continued to be closely associated with policy through attendance at Executive meetings and other means.

The rising trend of claims payments, other than for personal injury and coal class traffic, was arrested.

The many timetable improvements included the stopping of main line trains at suburban stations in London and other large towns, to save journeys to main termini. A campaign to improve punctuality had good results, as shown in *The Railway Gazette* from time to time. In July, 1952, holiday traffic demands on coaching stock resulted in cancellation of some scheduled services, though relief was obtained by adjusting Services traffic.

Freight traffic was heavy throughout the year. Despite bad weather during the winter months, general freedom of movement was maintained by prompt tackling of traffic accumulation and by using all available routes to the best purpose, irrespective of Regional boundaries. A result of re-routing traffic was the closing during the year of six more marshalling yards. Speeding up of freight services continued, and the number of brake-fitted express freight trains rose to 2,574 weekly, against 1,749 in 1938. Progress continued in mechanisation of railway cartage.

All British Railways cross-Channel passenger and cargo ships have been equipped with radar.

Staff Welfare

Expenditure authorised during the year on schemes for the welfare of the staff amounted to £1,359,450, covering new staff buildings, first-aid facilities, ventilation, catering, and so on.

Wage claims were received from practically all sections of the staff, and the settlements involved British Railways in additional labour costs of £2 million during 1952, and £12·5 million in a full year. Claims made in 1951 and not settled until 1952 cost a further £3·5 million in a full year.

Improved Track Maintenance

The high rate of turnover of staff in industrial areas militated against the restoration of the track to prewar condition. Nevertheless with extension of mechanised equipment, there was a steady improvement, and speed restrictions on main lines were reduced from 52 to 20. Early in the year, the maximum speed limit on some sections of main line were raised from 80 to 85 m.p.h.

Development of new techniques, standardisation, and increasing mechanisation are producing economies running at about £1·5 million a year in permanent way maintenance and of £250,000 in renewals. Mechanisation is stated to make the service more attractive.

There was further improvement in the cleanliness and appearance of carriages.

London Transport

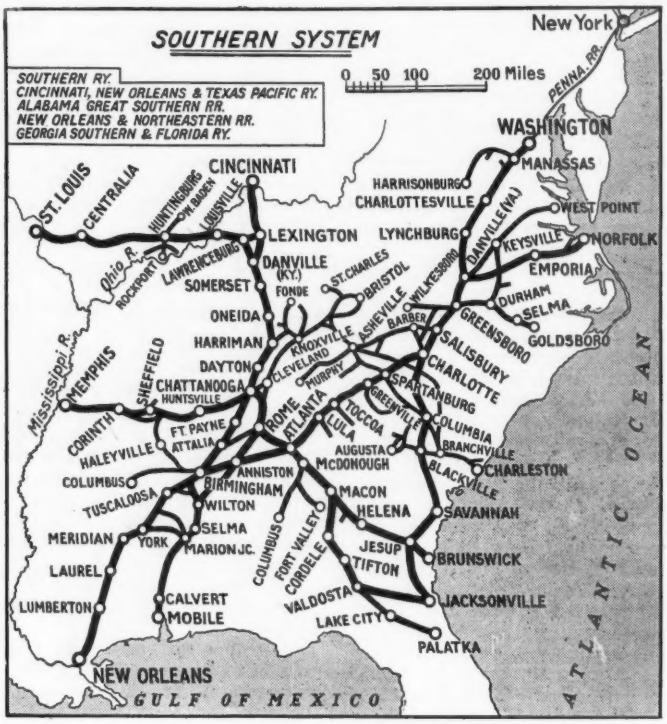
A major event in London Transport was the replacement of the surviving trams by oil buses. By the end of 1952, nearly 85 per cent. of all double-deck buses were postwar vehicles. On London Transport railways, delivery of new rolling stock facilitated improvement of peak-hour services.

Attention is drawn in the report to the serious financial liability of the Caledonian and other canals owned by the Commission over which commercial traffics do not suffice to meet maintenance costs.

Automatic Controls at New U.S. Marshalling Yard

Push-button route-selection and radar type speed measurement to guide retarder operators

ONE of the largest mechanised marshalling yard projects completed in the U.S.A. during 1952 was the Ernest Norris Yard of the Southern Railway System. The expenditure on this installation was $9,200,000, and it has been planned to form an integrated layout ensuring an uninterrupted flow of wagons from incoming trains, through a retarder classification yard, and into outgoing trains with the minimum lost motion. Facilities for controlling the passage of wagons coming off the hump into the classification sidings include the use of radar technique to indicate their speed to the retarder operators.



Map of the Southern system, showing Birmingham at the junction of the lines to Chattanooga and Atlanta

Ernest Norris Yard is located approximately six miles from Birmingham, Alabama, and extends for some four miles in a fork between the Alabama Great Southern main line to Chattanooga and the Birmingham Division main line to Atlanta. In the normal traffic pattern almost 24 per cent of all inbound wagons to Birmingham come in from the New Orleans-Meridian line; a little over 20 per cent from the north, Chattanooga and beyond; approximately 18 per cent from Atlanta and beyond; 10 per cent from the west, Columbus, and Sheffield lines; 9 per cent from the Mobile Division; and approximately 19 per cent from Birmingham (including the Woodlawn-Bessemer branch) and connections. Outbound traffic follows roughly the same pattern, with a slight increase in the percentage of wagons moving east to Atlanta and a slight decrease in the percentage moving south to Meridian and beyond.

The installations consist of a 14-track receiving yard, with two through tracks; a 56-track classification yard; two departure yards of six tracks and a through track each; a car repair yard containing six tracks; a 14-track local yard; and a variety of yard towers and buildings, including stock pens, refrigerator car icing facilities, a storehouse, and diesel shop and servicing facilities.

All goods train and yard engines from Birmingham, the south, and west use the two main freight lines from Birmingham to the yard. At the south end of the yard two tracks lead from the main line into the receiving yard. Trains from Atlanta and Chattanooga enter the north end of the receiving yard. Six of the twelve receiving tracks accommodate from 39 to 60 wagons each, including a four-unit diesel and caboose. The other six tracks have capacities ranging from 128 to 147 wagons, plus four-unit diesel and caboose (all car capacity estimates are based on 45-ft. box cars).

From the receiving yard a track leads up over the hump into the classification yard. As wagons are propelled from the receiving yard to the hump they pass a dragging equipment detector, a pit where inspectors examine brake rigging and running gear, then the point where coupler knuckles are wedged open with Celotex pegs and the hump conductor's office where he pushes the buttons that send the cars into the right classification tracks. Two tracks from the departure end of the east departure yard to the through track of the west departure yard run under the hump allowing trains or engines to pass from one side of the yard to the other without interrupting the flow of cars over the hump.

The air-conditioned yard office building with its six-storey tower stands at the crest of the hump. At the top of this building is the hump controller's office, with the control panel from which he selects any of the 56 classification yard tracks into which a cut is to proceed.

The act of pushing one of the 56 buttons originates a coded route description which defines the position of all the points the wagon will encounter in its route. This code is passed on to the first points over which the wagon must travel. They then operate automatically, as the route may require.

The code, however, is held until the wagon arrives at the points. The passing of the wagon advances the code to the next points over which it must travel. Here the points are operated in accordance with the code. Again the wagon arrives and transfers the code to operate the next points, and so on until the wagon arrives on its designated classification track.

One element of the code is identified with each pair of points; hence there are as many code elements as there are points in a route. As points are passed, the elements determining their positions are dropped and only the remainder of the code is transferred ahead. The codes will not mix with each other and each will remain identified with its own wagon.

As many as four push-buttons may be pressed to designate the tracks to which following cuts should move, even before the first cut has arrived at the first points. The codes thus originated will be stored, each in its own relay unit, until the preceding code has moved on to the second points; each code will then follow to the first points to operate it for its own wagon or cut. Illuminated

indicator numbers show the numbers of the tracks that have been selected by the operator at any moment. They are extinguished automatically when a wagon reaches its destination track.

All power points are electrically operated by G.R.S. Model 6 machines specially designed for yard work. This machine is fast in operation, having high-speed gearing giving a switch operation complete in approximately 0·6 sec. from the time of initiation of control. It is constructed so that the switch can be trailed without damage to the machine or switch points.

Single-rail detector track circuits are installed at each pair of points. The circuit arrangement provides for completion of switch movement where track-circuit occupancy occurs during the machine operation. Since these circuits are occupied in sequence, they are used in the automatic system to develop the route one pair of points in advance.

The circuits start 15 ft. ahead of the points to allow operating time. Each circuit is 55 ft. in length to prevent spanning by the longest wagon. Track-circuits employ alternating current on the track with rectification to operate a direct current high-resistance relay which is located in the tower. Very rapid shunting results from the use of this circuit.

Radar Speed Measurement

The speed of wagons approaching the retarders at the foot of the hump is measured and indicated to the retarder operator by a device using the radar technique of signal reflection. This is known as the S-1 Speedmeter, and was supplied by the Automatic Signal Division of Eastern Industries Inc. It consists of a radio transmitter which transmits unmodulated 2,455 Mc/s signals continuously. The receiver for the unit is mounted on the same chassis as the transmitter and some of the original signal from the transmitter is picked up by the receiver. While it is important that this signal be picked up by the receiver, direct coupling is not used, normal coupling between adjacent U.H.F. antennæ being sufficient.

When the signal from the transmitter encounters a metallic object, it is reflected back to the receiver. If the object from which the signal is reflected is moving, the Döppler effect will cause an increase or decrease in the frequency of the reflected signal. The frequency change in this case is 7·5 c/s per mile per hour. The receiver now has two frequencies impressed on its antenna circuit; these are heterodyned and fed through a frequency-sensitive circuit to a meter calibrated in miles per hour.

Since the resultant heterodyne signal is the beat frequency of the original and the reflected signal combined, and since the reflected signal is proportional to the speed of the object causing the reflection, the meter reading obtained is a true speed indication, within certain limits.

The antennæ for both the transmitter and the receiver are shunt-fed twin dipoles with reflectors. The beam, therefore, should be relatively narrow. Considerable experiment was required before these instruments were properly located and adjusted. As finally located, the transceiver part of each speedmeter is mounted in a weatherproof cast-iron housing having a Plexiglass window for radiation purposes. The antennæ are at approximately track level. Each speedmeter serves two retarders. Two speed indicators are used with each meter, one being in the cast-iron housing along with the transceiver, while the other is mounted on the retarder controller.

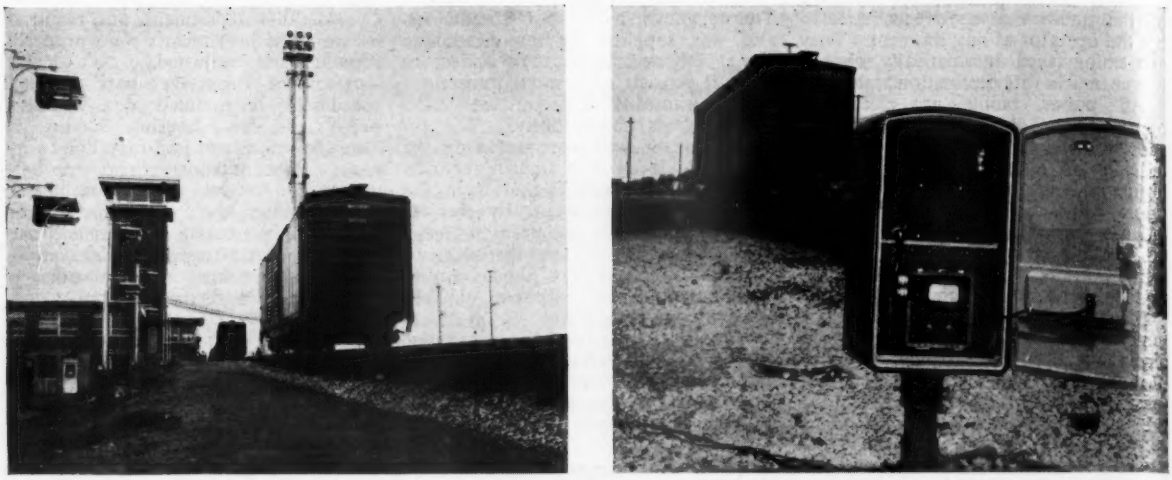
Retarder Operation

Retarders are of the General Railway Signal Company's Type "E." A master retarder 148½ ft. in length is located on the hump, and seven 99-ft. retarders each control vehicles approaching a group of eight tracks. The retarders are made up of sections in multiples of 5½ ft. units. Each section is driven by a mechanism consisting of a train of gears operated by an electric motor.

Inner and outer steel shoes are pivoted between helical springs. The compression of the springs governs the amount of retardation and the shoes are moved to any of three positions to obtain three degrees of retardation.

Therefore, to obtain retardation, the shoes are positioned so that the space between them is less than the thickness of a wheel, which causes the springs to be compressed as the wheels move between the shoes. A magnetically-released brake is connected in series

Looking north over the Ernest Norris Yard, with reception sidings in foreground, leading to the hump, classification yard, and departure sidings beyond. The diesel running repair shop is in left foreground



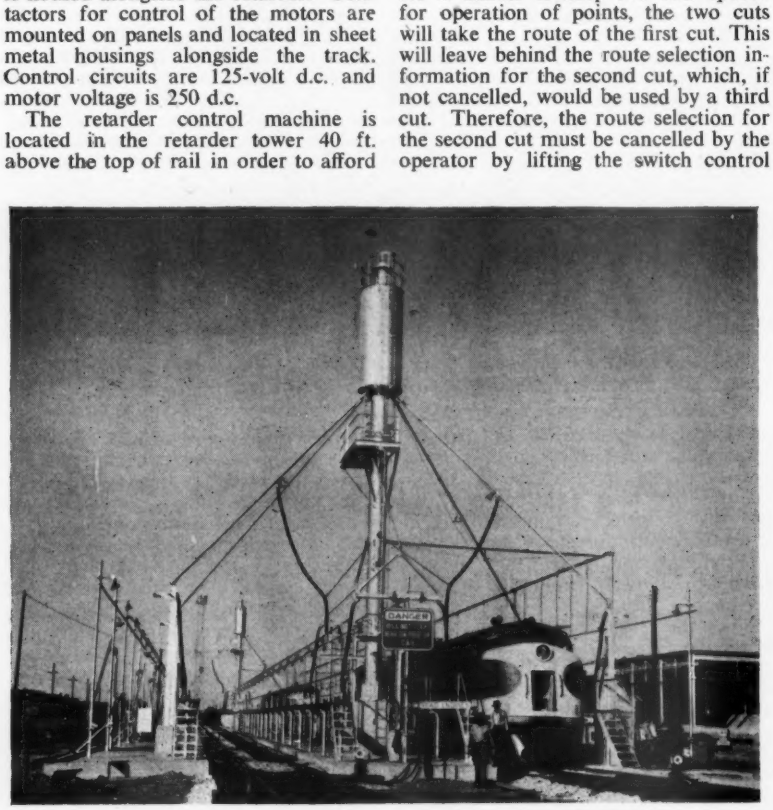
A wagon descending the hump towards the master retarder (left); and (right) radar type meter from which the speed of vehicles is transmitted to the retarder operators

with the motor through its coil and is thus energised for release when the motor is operating. When the mechanism corresponds to the control position selected, the brake holds the retarder in this position until a new position is set up. Electrical energy for driving is required only during the time of motor operation, which will not exceed 3 sec. per move. The retarder mechanism, consisting of gearing, motor, and brake, is housed alongside the retarder. Contactors for control of the motors are mounted on panels and located in sheet metal housings alongside the track. Control circuits are 125-volt d.c. and motor voltage is 250 d.c.

The retarder control machine is located in the retarder tower 40 ft. above the top of rail in order to afford a good view of yard operations. It is composed of two panels in the form of a "T." The cross panel is etched diagrammatically to show the tracks and points located beyond the retarders. A control lever for each pair of points is mounted at the switch locations on the panel, and can be used instead of the automatic switching set up in the hump controller's office if necessary. If, under unusual conditions, the retarder operator is unable to keep two cuts spaced for operation of points, the two cuts will take the route of the first cut. This will leave behind the route selection information for the second cut, which, if not cancelled, would be used by a third cut. Therefore, the route selection for the second cut must be cancelled by the operator by lifting the switch control lever at which the overtaking took place.

The stem portion of the panel is etched to show the location of the four junction switches and the eight retarders. Control levers for the switches and toggle switches for controlling the retarders are mounted at the function locations.

Four radar speed indicators are mounted on a separate panel which is placed at the top of the "T" section.



Sanding, fuelling, and washing facilities for diesel locomotives working trains into the Ernest Norris Yard

Communications

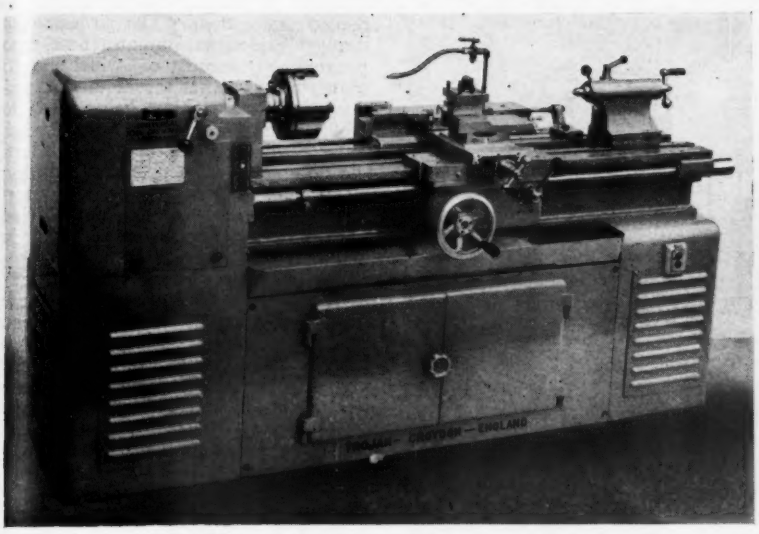
General supervision of operations in the yard is exercised by means of a loudspeaker system with "talk-back" facilities. Several types of "talk-back" loudspeakers are used. Where clearances do not permit of poles, a so-called "ground line" loudspeaker system is adopted. In this assembly each loudspeaker is mounted on a stainless steel cover plate attached to a cast iron box, which stands on a concrete base through which wire connections are made. The dimensions of the box are approximately 10 in. wide by 8 in. high by 6 in. deep.

The assembly is installed between the sleepers on the outside of the track and as close to the base of the rail as track maintenance will permit. The top of the box is about ½ in. below the top of the rail and ramps are provided on each side of the loudspeaker for protection against dragging equipment on vehicles.

Nine diesel locomotives assigned to the Ernest Norris Yard are equipped with two-way radio sets manufactured by the Westinghouse Electric Corporation. The fixed station radio equipment, also by Westinghouse, is unusual in that when not in use for communications purposes, an electronic device causes the radio transmitter to transmit a 1,200-cycle tone for ½ sec. at 10 sec. intervals. These tones are heard on the hump engine over the radio loudspeaker. This is an indication to the driver that the radio is in operating condition and is in range of the ground station.

New Oil Grooving Machine

Multi oil grooves are generated in a continuous cut without spindle indexing



The Trojan Universal oil grooving machine

A DEMONSTRATION was given recently (see June 19 issue) of a prototype oil grooving machine capable of cutting various types of oil grooves without individual indexing. The machine, known as the Trojan Universal, is designed and manufactured by Trojan Limited, the world sole selling agent being the Selson Machine Tool Co. Ltd., one of the members of the "600" Group of Companies.

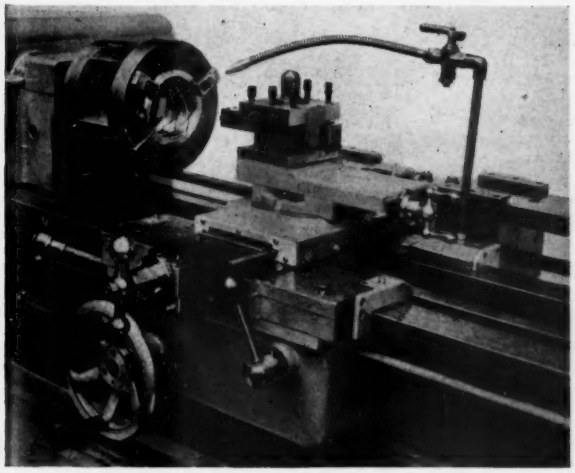
In operation the generating principle is used, by which means oil grooves are cut progressively in the same operation without stopping the machine; up to 24 grooves can be cut in one operation. After the initial training batch production is possible by unskilled operators. Micrometer adjustment of the feed rest assures accuracy of depth of groove.

The headstock spindle is motor-driven by vee-belt and worm gearing and can be indexed to any divisor of 24 by disengaging a hand-operated dog clutch. It is coupled to a motion crank through change gears. The circular crank motion is changed into reciprocating motion through a crosshead which imparts the reciprocating motion to the machine saddle slide. The saddle is locked to the reciprocating shaft and its position maintained by means of a locking stop collar. A cam situated under the saddle relieves the tool on either backward or forward stroke enabling right- or left-hand grooves to be cut. Special cams can be fitted to cut eccentric face grooves, and a tailstock can be used for external shafts up to 46 in. long.

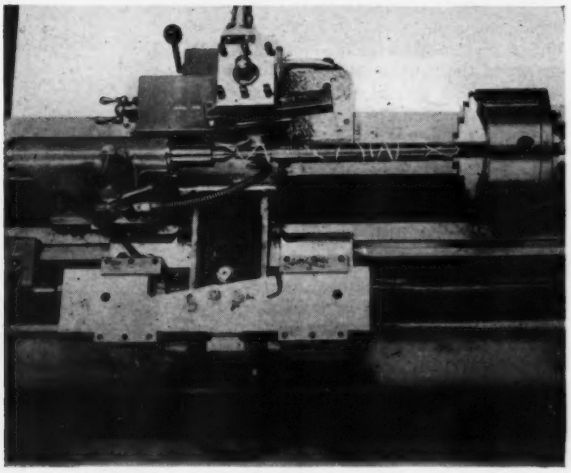
Taper Grooving

Taper grooving can be accomplished by clamping the removable sub-slide and angle control plate in the grooving position by an anchor-bracket. Multi-grooves can be cut singly if required simply by disengaging the clutch and turning the headstock spindle by hand until the numerals of the spacing required coincide on both graduated diameters. Change gears are provided for generating in a continuous cut, any number of equal spacings and any helix angle or lead within the capacity of the machine without spindle indexing, while grooves required only in parts of the helix angle can be obtained through a cam which moves the tool away from the workpiece. A suitable cam is also provided for cutting face grooves up to approximately 1 in. eccentricity. Splines, both male and female, and keyways can be cut, during which the workhead remains stationary.

The mechanism is totally enclosed in the headstock. Stop and start push-buttons are provided, and a 1½-h.p. motor running at 1,430 r.p.m. gives a spindle speed of from 49 to 160 r.p.m., depending on whether a large or small pulley is used. The maximum diameter of work admitted over the bed or cross-slide is 14 in. and 8 in. respectively. The machine is 8 ft. long overall by 3 ft. wide by 4 ft. high.



A phosphor-bronze bush with internal oil grooves completed



External oil grooving showing the taper attachment set-up

New Bridge for River Diversion

Eastern Region work to accommodate course diverted for flood relief

The completed single-line bridge of five spans

AS a result of the serious flooding in the Spalding and Crowland areas during the spring of 1947, caused by the River Welland overflowing its banks, the River Catchment Board sought powers to divert the course of the river three-quarters of a mile east of its existing course. The project was to divert most of the tidal water away from the centre of Spalding.

This necessitated the construction of a new bridge to take the railway line at 10 miles 24 ch., between North Drove and Weston, on the Spalding-Bourne section of the King's Lynn-Bourne line of the Eastern Region. The railway track was diverted from 9 miles 76 ch. to 10 miles 56 ch. in August, 1951, and some temporary alterations were made to Cunningham's Drove level crossing, where the gate wheel was removed and the gates hand-operated. The diversion provided the same running facilities, except for the refuge siding on the up side, which was given up temporarily until the work was completed. A temporary connection was laid in for the unloading of ashes, ballast, and other material, and approximately 20 wagons a day were dealt with.

Construction Procedure

The new bridge has been constructed to carry a single line and consists of five spans each approximately 54 ft. 6 in. long. The two abutments and four piers, forming the substructure, are constructed of brick-faced concrete supported on reinforced concrete piles. The superstructure is of the half through type consisting of main girders and rolled steel joists in a concrete floor.

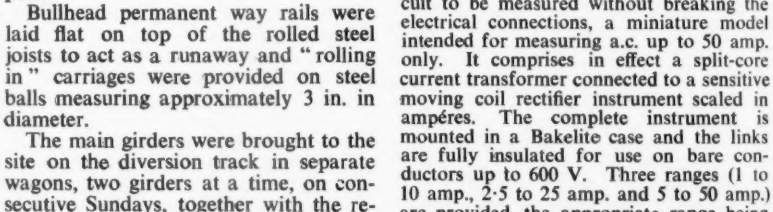
After the substructure had been completed, "rolling in" paths, consisting of rolled steel joists in pairs, were erected parallel with the face of the piers and supported on timber trestles extending from the diversion track to inside the piers.

Bullhead permanent way rails were laid flat on top of the rolled steel joists to act as a runaway and "rolling in" carriages were provided on steel balls measuring approximately 3 in. in diameter.

The main girders were brought to the site on the diversion track in separate wagons, two girders at a time, on consecutive Sundays, together with the required number of floor joists. The main girders were jacked up on the wagons and the "rolling in" paths extended under them. The girders were "rolled" sideways, one at a time, into position by means of winches and snatch blocks to get the required direction of pull, great care being taken to move each girder at the same speed. After bedding down the main girders, the floor joists were placed in position by derrick. The concreting and waterproofing of the floor was then carried out and the sleepered track laid in ballast.

The line has been reproduced exactly as it was previously, except that there is now a gradient of 1 in 160 at each end of the new bridge. The gate wheel at Cunningham's Drove level crossing has been replaced and the crossing is again electrically controlled from Clay Lake signal box. Traffic was transferred back to the new permanent track over the bridge on June 7 last.

The work was carried out under the supervision of Mr. J. I. Campbell, M.Inst.C.E., Civil Engineer, Eastern Region.



Arrangement of "rolling in" paths for positioning girders

CURRENT MEASUREMENT THROUGH INDUCTIVE LINK.—The General Electric Co. Ltd. has added to its range of link testing ammeters, which enable current in a circuit to be measured without breaking the electrical connections, a miniature model intended for measuring a.c. up to 50 amp. only. It comprises in effect a split-core current transformer connected to a sensitive moving coil rectifier instrument scaled in ampéres. The complete instrument is mounted in a Bakelite case and the links are fully insulated for use on bare conductors up to 600 V. Three ranges (1 to 10 amp., 2·5 to 25 amp. and 5 to 50 amp.) are provided, the appropriate range being selected by a thumb-operated switch. The instrument measures 7 in. × 3 in. × 1¾ in. and weighs 1 lb. 1 oz.

RAILWAY NEWS SECTION

PERSONAL

His Royal Highness the Duke of Edinburgh has been pleased to accept Honorary Fellowship of the Institute of Welding. His Royal Highness was formally elected to this class of membership by the Council of the Institute at its meeting on June 10, 1953.

Sir Michael Barrington-Ward, a Member of the Railway Executive since its inception and formerly Divisional General Manager of the London & North Eastern Railway, will retire on October 1, 1953. In acknowledging his letter intimating his wish to retire from the railway service, Mr. Alan Lennox-Boyd, the Minister of Transport, has written to Sir Michael Barrington-Ward: "I would like to thank you personally, and on behalf of the Government, for the most valuable service you have given since the setting up of the Executive in 1947, and all your fellow countrymen owe you a great debt for many years of service to the railway."

London Transport Executive Appointments

Arising out of the retirement of Mr. P. Croom-Johnson, Chief Engineer, London Transport Executive, this week, the following changes in organisation and appointments are announced:—

Mr. C. E. Dunton, M.A.(Cantab.), M.I.C.E., at present Civil Engineer, has been appointed Chief Civil Engineer. The following officers will report to him: New Works Engineer, Signal Engineer, Assistant Civil Engineer (Permanent Way), Assistant Civil Engineer (Structures) and Assistant Civil Engineer (General).

Mr. A. C. Edrich, A.M.I.C.E., at present Permanent Way Engineer (Railways), has been appointed Assistant Civil Engineer (Permanent Way).

Mr. T. S. Pick, B.Sc.(Eng.), M.I.E.E., M.Inst.F., at present Electrical Engineer, has been appointed Chief Electrical Engineer.

Mr. T. R. Bilbow, F.R.I.B.A., Architect, will report to Mr. A. H. Grainger, Member of the Executive.

The Chief Civil Engineer and the Chief Electrical Engineer will be responsible to Mr. A. H. Grainger for the discharge of their respective duties and functions and through him to the Executive.

Mr. R. A. Lovell, O.B.E., M.I.Mech.E., has been appointed Deputy Chief Engineer, Electrical & Mechanical Engineering branch, Ministry of Transport.

The Institute of Transport

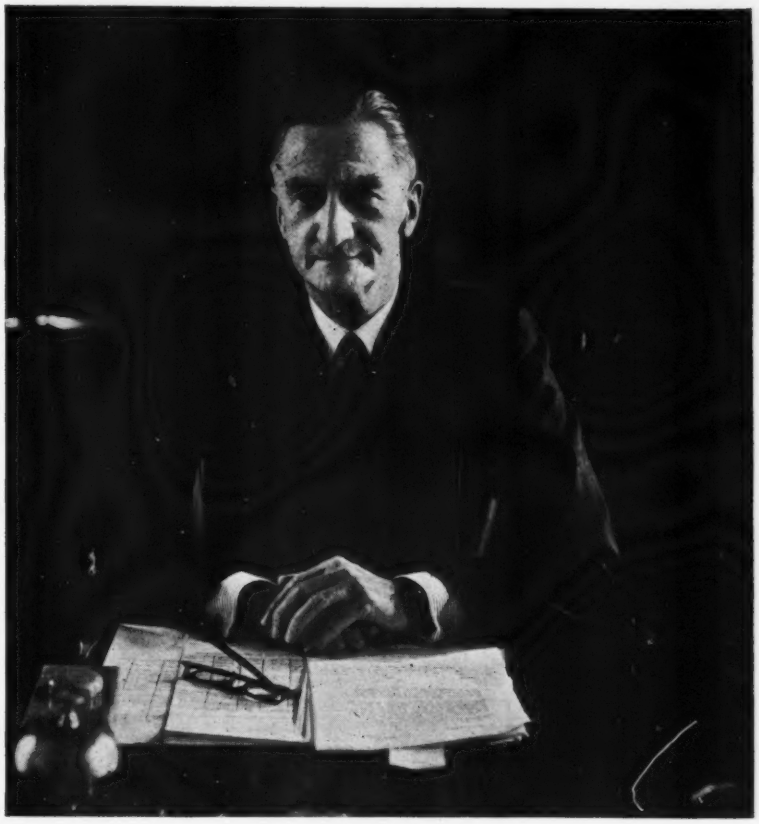
At the annual general meeting of the Northern Ireland section of the Institute of Transport held on June 8, Mr. G. B. Howden, Chairman of the Ulster Transport Authority, was elected Chairman, Mr. J. Mackle, General Manager of Belfast Corporation Transport, was appointed Vice-Chairman. The following officers were also appointed: Hon. Treasurer, Mr. T. B. Andison; Secretary, Mr. R. L. Streight; Assistant Hon. Secretary, Mr. J. J. Woodrow.

Mr. T. B. Welch, Chief Mechanical Engineer, Nigerian Railway, retired on May 21. He will remain with the railway attached to the Chief Superintendent's Office to revise the Rule Book and Appendix to General Rules.

Mr. H. Bransom, District Superintendent, Nigerian Railway, retires this month.

Mr. N. N. Kakati, B.Sc., A.M.I.L.E., A.M.I.E., Deputy Chief Mechanical Engineer, North Eastern Railways, retired with effect from June 11, 1953.

Mr. O. Wichser, Chief Engineer, Construction and Maintenance of Way, Swiss Federal Railways, has been appointed General Manager (Working & Construction, Electrification) in succession to Mr. P. Kradolfer, who retired recently.

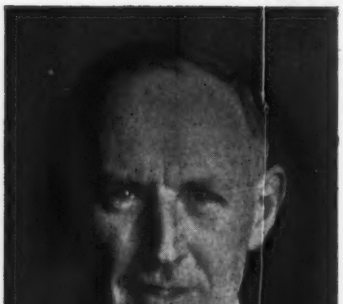


Mr. A. Dalton, C.B.E.

General Manager, East African Railways & Harbours, 1948-53

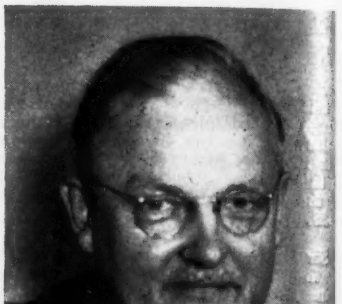
Mr. Alfred Dalton, C.B.E., the first General Manager of the amalgamated East African Railways & Harbours, who is to retire at the end of this month, was born in Cork on January 20, 1892, and entered the service of the Great Southern & Western Railway (Ireland) in the Goods Department at Cork in 1909. He was transferred to the General Manager's Office in 1912. In the 1914-18 war, after service with the Royal Dublin Fusiliers in Gallipoli and France he was transferred to the Royal Engineers in 1917 and was appointed Commanding Officer of the 10th Light Railway Operating Company which was then in France. He remained in that post until demobilisation in 1919. After returning for a short period to the General Manager's Office, Great Southern & Western Railway, he was appointed Assistant Traffic Superintendent, Tanganyika Railways, in November, 1920, serving for a time as Personal Assistant to the General Manager and reaching District rank in 1930. After acting as Traffic Manager of the Tanganyika Railways in 1935, he was appointed Assistant Superintendent of the Line of the Kenya & Uganda Railways & Harbours in 1936 and was promoted to Superintendent of the Line in 1938. In May, 1942, he was made Deputy General Manager of the Kenya & Uganda Railways & Harbours, retaining his appointment as Superintendent of the Line. On January 1, 1948, he was appointed Acting General Manager, and when the Kenya & Uganda Railways & Harbours and the Tanganyika Railways & Ports Services were amalgamated on May 1, 1948, he was appointed General Manager of the amalgamated system. Mr. Dalton was made a C.B.E. in the New Year's Honours, 1942, in recognition of the work he had done as Superintendent of the Line, more particularly in the efficient movement of troops and equipment in the first years of the war against Italy.

Mr. J. C. Bailie, Operating Superintendent, G.N.R.(I.), has been elected a Member of the Institute of Transport.



Mr. F. W. Abraham, O.B.E.
Motive Power Superintendent, London Midland Region,

Dr. ing. Walther Helberg
President of Bundesbahndirektion, Hamburg, German Federal Railway



Professor Dr. ing. F. E. Frohne
Chairman, Executive Board, German Federal Railway

Mr. F. W. Abraham, M.I.Loco.E., Motive Power Superintendent, British Railways, London Midland Region, who, as recorded in our June 5 issue, has received the honour of O.B.E. in the Coronation honours, was educated at Dover College and joined the Great Western Railway in 1905, serving his pupilage at Swindon Works until 1911, when he joined the Midland Railway and became an improver at Derby running shed. In July, 1912, Mr. Abraham was appointed Shed Foreman at Kettering, and, later in the same year, Acting District Locomotive Superintendent, Worcester. He was appointed in the same capacity in 1913 to Derby and in 1914 to Plaistow. In the 1914-18 war he saw active service with H.M. Forces from November, 1914, until July, 1919, serving first as a captain in the Railway Transport Establishment in France, and later as a major in command of a field battery in the R.F.A. In 1919, Mr. Abraham returned to Plaistow as District Locomotive Superintendent, a position he held until 1929, when he was appointed to Assistant to the Superintendent of Motive Power, Manchester. He was appointed in the same capacity to Derby in 1933, and to Euston in 1934. He became Assistant Divisional Superintendent of Operation, Manchester, L.M.S.R. (Central Division), in 1934, and in January, 1940, was appointed Assistant Divisional Superintendent of Operation, Crewe (Western Division). He became Assistant Superintendent of Motive Power, L.M.S.R., in July, 1943, and Motive Power Superintendent, London Midland Region, in 1948.

Dr. ing. Walther Helberg, President of Bundesbahndirektion, Hamburg, German Federal Railway, was born in Hamburg on February 24, 1889. On leaving school he studied machine engineering at the Karlsruhe Technical College, passing the Diplomingenieur examination in 1922. While he was studying he was a locksmith apprentice at a Hamburg machinery factory and a workman with Blohm & Voss of Hamburg. After completing his studies he joined a Baden firm, subsequently entering the railway service. Shortly afterwards, he took over the responsible management of the Berlin-Grunewald locomotive research service, several years later being appointed to the Reichsbahn-Zentralamt, Berlin, where he was engaged on research work and railcar construction. After the 1939-45 war, Dr. Helberg resumed his research work with the Reichsbahn-Zentralamt, then at Göttingen. In June, 1947, he was appointed Deputy General Manager at the Bundesbahn head office at Offenbach. On the retirement of

Mr. J. F. Hatje
Member, Executive Board, German Federal Railway

Dr. Werner Hilpert
Member, Executive Board, German Federal Railway

Dr. F. Schelp
Member, Executive Board, German Federal Railway

the then Manager of the Bundesbahn, Dr. Helberg was appointed provisional leader of the Offenbach head office, later being promoted Ministerialdirektor. He was appointed President of Bundesbahndirektion, Hamburg, when the Bundesbahn Executive Board took up the general management of the German Federal Railway.

Professor Dr. ing. Friedrich Edmund Frohne, Chairman of the German Federal Railway Executive Board, was born on June 22, 1891, in Leipzig. After attending the Leipzig Grammar School, he entered the Technical College where he obtained a diploma in constructional engineering. During the 1914-18 war he served with a military railway administration, and, in 1918, he entered the service of the Saxony State Railway, passing the Regierungsbaurat examination in 1919. He was subsequently engaged with the Neubauamt, Dresden I, and, in 1923, was posted to the Reichsbahndirektion in the same town. He was there engaged in the construction of large stations and in the reconstruction of several marshalling yards in Saxony. He received the degree of Dr. ing. at Dresden Technical College in 1926. Dr. Frohne was appointed Abteilungspräsident with the Reichsbahndirektion at Hanover in 1938, in this capacity conducting the reconstruction of the Brunswick railway plants. From 1941 to 1945 he was President of the Transport Committee of the Reichsvereinigung Kohle. In 1941 he was appointed Honorary Professor at the Brunswick Technical College, and, in 1946, was appointed State Secretary to the Low Saxon Ministry of Transport. Dr. Frohne was Bi-zonal Transport Director from August, 1947, to the formation of the German Federal Government, and, on July 10, 1950, he was appointed State Secretary in the German Federal Ministry of Transport. Dr. Frohne, who for many years before the 1939-45 war advised the Greek Government regarding transport problems, designed the layouts for the reconstruction of the stations of Salonique, Athens and Patras. He was also appointed Advisor on the reconstruction of the Riga railway facilities by the General Management of the Latvian State Railways.

Mr. Johann Friedrich Hatje, Member of the Executive Board, German Federal Railway, was born in Hamburg-Eidelstedt on December 23, 1889. He became a bookbinder after completing his education at Stellingen Elementary School, and, in 1914, he entered the military railway service, in which he remained until 1918. After the war, Mr. Hatje was employed at Hamburg-Altona station and in 1919 was elected to the Personnel Council at that station. From 1920-29 he was Chairman of the Personnel Council of the Reichsbahn Head Office in the Reichsverkehrsministerium. Until 1933 he was chief of the Railwaymen's Union (Stuttgart District). Between 1933 and 1945 Mr. Hatje occupied himself variously as training- and electro-welder, bookbinder and commercial agent, becoming, in the latter year, Chairman of the Land Württemberg Railwaymen's Union at Stuttgart, and, later, Deputy Chairman of the Railwaymen's Union of Germany (GdED). Mr. Hatje has been a member of the Bundesbahn Advisory Council since 1949.

Dr. Werner Hilpert, Member of the Executive Board, German Federal Railway, was born in Leipzig on January 17, 1897. During the 1914-18 war he served in the German Army. After the war he studied national economy and economic history at the Leipzig University, receiving the degree of Doctor of Philosophy in 1920. He was a member of several committees of the Berlin Retailers' Association and Co-Editor of an economic journal, and until 1939, when he was imprisoned for political reasons, he acted as advisor to economic enterprises, and, in particular, to certain department store combines. On his release in 1945 Mr. Hilpert became Chief Director of the Frankfurt Chamber of Trade & Commerce, and, when the Land Hesse was constituted, he was appointed Deputy Minister President, becoming at first Minister of Economy and, later, Finance Minister. He was in addition Chairman to the Finance Committee of the Länder Council and Bundesrat. Dr. Hilpert retired from the Hesse State Government early in 1951, being engaged as advisor and member of various boards of directors until he became a member of the Bundesbahn Executive Board.

Dr. Fritz Schelp, Member of the Executive Board of the German Federal Railway, was born in Buenos Aires on March 8, 1898, and educated at Bremen Grammar School. After serving in the German Army during the 1914-18 war, he studied the jurisprudential and State sciences at Göttingen and Freiburg universities. He was employed as a junior barrister at Bremen and took his Assessor's examination at Hamburg, after which he worked for two years in the German Foreign Office under the late Minister Stressmann. He entered the railway service in 1927, being engaged until 1932 with Reichsbahndirektion at Hamburg in the commercial and personal administrative departments. Dr. Schelp was subsequently appointed District Superintendent at the Verkehrsämte at Göttingen, Weimar and Hamburg, and, from 1934 to 1940, as Divisional Superintendent with the Reichsbahndirektion at Hamburg. From 1940-41 he served with the Generalbetriebsleitung Süd at München, subsequently being appointed to the Reichsverkehrsministerium in Berlin, where he later presided over the Commercial & Tariff Department. Dr. Schelp was President of the Commercial Department at Eisenbahndirektion, Hanover, until May, 1950, when he was appointed to his present position of President, Eisenbahndirektion, Hamburg.

The following staff changes are announced by British Railways, London Midland Region:—

Mr. H. Leach, Head of Section (Road Transport) Commercial Superintendent's Office, Euston, to be Assistant (Outdoor) Commercial Superintendent's Office, Euston.

Mr. A. H. Flindt, Goods Agent, Wigan, to be Goods Agent, Liverpool, Alexandra Dock.

Mr. I. Cox, Stationmaster, West Croydon, Southern Region, to be Stationmaster, Wigan (N.W.) also i/c Wigan (Wallgate).

Mr. P. Sutcliffe, Shed, Yard & Cartage Superintendent, Birkenhead, Morpeth Dock, to be Goods Agent, Liverpool, Langton Dock and North Mersey.

Mr. J. Southey, Chief Clerk, West Bromwich, to be Goods Agent, Albion.

Mr. J. H. S. Price, Chief Transit & Station Working Clerk, Leicester, to be Goods Agent, Leicester, Braunstone Gate.

We regret to record the death on June 17, at the age of 52, of Dr. George Edwin Wilson, Chief of British Railways laboratory at Crewe.

The following appointments have been announced by British Railways, Southern Region:—

Signal & Telecommunications Department:

Mr. W. E. Hancox, Outdoor Assistant to Signal & Telecommunications Engineer, will become Assistant Signal Engineer, with effect from June 1, 1953 (post redesignated).

Mr. W. J. Wright, 1st Assistant for Telegraphs & Telephones, will become Assistant Telecommunications Engineer, with effect from June 1, 1953 (post redesignated).

Mr. H. Eccles, J.P., District Goods Superintendent, London, British Railways, London Midland Region, is retiring on June 30.

Mr. R. E. Evans, B.Sc. (Eng.), A.M.I.C.E., Senior Technical Assistant, Doncaster District Engineer's Office, has been appointed Assistant District Engineer, Cambridge.

Mr. R. P. Munnings, Chief Clerk, Norwich Thorpe Goods Station, has been appointed Harbourmaster/Goods Agent at Lowestoft in succession to Captain L. A. Rhodes, who retired on May 15, 1953.

Mr. G. E. Smith, M.A. (Cantab.), has been appointed Contracts Manager, Brush Bagnall Traction, Limited, Loughborough.

Mr. S. W. Rawson has been elected Chairman and Lord Aberconway Deputy Chairman of Wickman Limited.

Mr. Leslie Gamage has been re-elected President of the Institute of Export, for the eleventh time in succession.

Lt.-Colonel T. Child, T.D., B.Sc., M.I.Mech.E., has been elected to the board of the British Engineers Small Tools & Equipment Co. Ltd.

We regret to record the death on June 20 of Lt.-Colonel C. H. W. Edmonds, O.B.E., M.I.E.E., M.Inst.T., M.I.R.S.E. Colonel Edmonds, formerly with the Westinghouse Brake & Saxby Signal Co. Ltd. and, later, Siemens & General Electric Railway Signals Co. Ltd., was a Vice-President of the Railway Students' Association (London School of Economics).

Mr. A. R. Driessen, O.B.E., Commercial Manager of the Indian Cable Co. Ltd., has been appointed Chairman & Managing Director from May 1, in succession to Mr. D. J. McIntosh, who has retired. Before being appointed Commercial Manager last August, Mr. Driessen was Eastern Area Branch Manager in the United Kingdom for British Insulated Callender's Cables Limited. He joined the former British Insulated Cables Limited as Manager of the Sub-Office at Ipswich in 1944.

Mr. R. G. Duncan is retiring from the Skefko Ball Bearing Co. Ltd. at the end of June, after 33 years' service. For many years he has been the company's technical representative concerned with the sales of S.K.F. spherical roller bearing axleboxes for locomotives and railway rolling stock, and is well known to many railway and locomotive engineers at home and overseas. He is being succeeded by Mr. R. K. Innes, who started his railway engineering career at the G.W.R. Swindon Works and served for many years in India, where he was latterly Chief Mechanical Engineer of the Western Railway.

Discussion on Signalling Changeovers

Experiences with radio equipment

At a meeting of the Institution of Railway Signal Engineers held in London on March 10, with the President, Mr. T. S. Lascelles, in the chair, Mr. C. F. Challis introduced an informal discussion on signalling changeovers. His remarks divided the subject under the headings: (1) Planning—extent and nature of the scheme; possessions; staff available; existing signalling; permanent way alterations; and liaison; (2) stage working and preliminary testing—alterations to the existing signal boxes; pre-testing of all new equipment under final conditions; maximum preliminary work to produce minimum changeover work; and (3) the changeover—issue of detailed programme; efficient use of skilled staff; pre-view of works; clear definition of responsibility and work; cover for eventualities; good communications.

Mr. J. H. Currey referred to the difficulties which occurred at a busy terminal station where the traffic was steam-hauled. Delays due to the hand-signalling of traffic meant that work had to be spread over several weekends. Temporary wiring had to be superimposed on the permanent, involving considerably more testing. His Region had found the paging loudspeaker very useful in the event of telephones being left unmanned. They had found it essential to have an organisation which covered specific mealtimes for each man, to avoid overcrowding.

Mr. J. H. Fraser referred to a case where the traffic was entirely steam-hauled and where they went to considerable trouble to obtain possession, even terminating certain trains at stations outside and operating bus services; goods trains, in particular, were routed in different directions and certain trains were cancelled. That greatly speeded up the changeover. A detail sometimes overlooked was the training of the hand-signalman; quite an intensive service could be run on pure hand-signalling, if he was properly trained and there were proper telecommunications.

Mr. F. G. Hathaway, on communications, asked whether in the Southern Region the question of radio had been considered, particularly "walkie-talkie" sets for adjustments of track circuits.

Mr. A. Moss said that during the Liverpool Street-Shenfield electrification, from early June until the end of September, 1949, changeovers took place every week-end. The traffic department could not cancel any trains. All that was done was to give possession of a certain line for a certain number of hours, as the normal series of excursion trains had to run from Liverpool Street.

The procedure was to assess the staff available and divide them into gangs; each man had a schedule so that he knew exactly what he had to do. One of the great things which helped was the provision of amenities for the staff, such as arrangements for meals and for sleeping near the job.

Mr. H. Firminger said he had found radio equipment very valuable, as it enabled him to keep in touch with a particular man. Instead of relying on a number of people stationed at telephones, one or two people with "walkie-talkie" sets were able to go round to various points and report back to the signal box.

Major A. N. Stacey recalled a changeover on a good stretch of four-track main line and stretches of double line where, on a weekday, the 9.45 went down under semaphore signals and the 10.5 under colour-light signals, without any delay. Probably, more recent cases did not lend themselves to that.

Mr. B. F. Wagenrieder stressed the importance of the information on traffic working which was given by the District Inspector at the meetings held prior to the carrying out of installations.

Mr. F. W. Young said that in the case of a mechanical to mechanical changeover, it assisted matters if possession was obtained beforehand and the points were worked from the new levers prior to the day of the changeover. It was a great help to the operating department if the signal engineer not only gave facilities to the signalmen for training, but also gave them a small sketch of the layout and a complete chart showing all levers and routes which could be set up, which they could take away and study.

Mr. A. Cardani had had limited experience with "walkie-talkies," which were very useful in setting up track circuits, enabling communication to be maintained with men at each end, but when working with a mobile station receiving calls from several "walkie-talkies," all on the same frequency, there was a tendency for confusion to arise.

Mr. T. G. Robinson, speaking of "walkie-talkie" equipment, referred to the army type set incorporating four channels, but it was limited in its range to little more than half a mile; ground contours and other obstructions also placed limitations on its use.

L.T.E. Radio Practice

Mr. R. Dell replied that one must have a single frequency, for in dual-frequency working one frequency was used for speaking in one direction and the other in the opposite. Where several mobile sets were in use, they could not hear one another and were liable to cut in on the speech of another station.

London Transport used a transportable set which could be taken to a signalbox. It had 12 W. capacity, was run from motor-car batteries, and had a range of probably 10 miles. A second set could be taken to a convenient place on the track or moved about on a platelayer's trolley and formed a mobile headquarters for testing personnel. The "walkie-talkie," carried over the shoulder, could establish communication with either the signalbox or the mobile set.

Messrs. J. Runnett, C. C. Bennett, W. J. R. Brett, and O. H. Hoffman also contributed to the discussion.

After Mr. Challis had replied to the various points raised, he was accorded a very cordial vote of thanks, moved by the President.

British Railways Travel Centre in London

Booking and information office replacing four existing West End offices

On June 23, Mr. John Elliot, Chairman of the Railway Executive, opened a new British Railways booking and information office, known as the British Railways Travel Centre, in the West End of London. It is situated on the ground floor of Rex House at the corner of Lower Regent Street and Carlton Street, near Piccadilly Circus.

The whole of the side in Carlton Street, and much of the Regent Street side, is windowed, to show the interior which is air-conditioned and brilliantly lit. There is ample counter space and comfortable seating, and the equipment includes a projector for showing travel films.

The Centre, which was opened to the public on June 24, is the first British Railways office to sell tickets and reservations by all British, Irish and Continental routes. An expert staff, including interpreters, will be available to help the traveller. Mr. H. W. Saunders, who for eighteen years has been in charge of the British Railways office in Regent Street, is in charge of the new office, which will enable the present offices at 71, Regent Street, 7-8, Charing Cross, 22, Charing Cross Road, and Sherwood Street to be closed.

The space occupied by the Centre was intended originally to contain the balcony area of a restaurant which was to have had its main floor in the basement. During the war the two floors of the proposed restaurant were converted into separate air raid shelters, each divided into compartments by thick blast walls. They remained in that condition until work on the conversion of the ground floor for its new function began last February.

As most of the area of the premises is in the body of the building it depends on artificial lighting and ventilation. A plenum plant provides both ventilation and heating. The lighting gives daylight brightness throughout. The main public area has an "egg-crate" ceiling with fluorescent tubes above. The surrounding areas have acoustic plaster ceilings with tungsten lights spaced in a regular pattern.

The comparatively narrow frontage to Regent Street has been made to look wider by bringing out the ceiling with its pattern of light fittings to the edge of the fascia and keeping to the minimum any obstruction of the view by piers and walls. The fascia is of stainless steel, the facing of external piers in Portland stone, and of internal piers in slate. The floors in lobbies and vestibule are York stone, in the main public area teak, and in offices Resinoid.

The general contractor was Tersons Limited. The Centre was designed and carried out under the direction of Dr. F. F. Curtis, Architect, the Railway Executive, and his assistants.

Among those who accepted invitations to the opening were:—

British Transport Commission: Lord Rusholme and Mr. F. A. Pope, Members.

Railway Executive: Sir Michael Barrington-Ward, Messrs. David Blee, J. C. L. Train, and General Sir Daril G. Watson, Members; Messrs. E. G. Marsden, Secretary; H. H. Phillips, Chief Commercial Officer; and G. Wynne Davies, Publicity Officer; Dr. F. F. Curtis, Architect; Messrs. A. J. Pearson, Chief Officer (Administration), J. Ness, Chief Officer (New Works), R. H. Hacker, Chief Officer (Continental), and S. E. Parkhouse, Chief Officer (Operating).

Eastern Region: Messrs. C. G. G. Dandridge, Commercial Superintendent, and L. H. K. Neil, Continental Traffic Manager.

London Midland Region: Messrs. A. E. Hammett, Commercial Superintendent, and G. Dow, Public Relations & Publicity Officer.

North Eastern Region: Mr. S. W. Jesper, Public Relations & Publicity Officer.

Southern Region: Messrs. C. P. Hopkins, Chief Regional Officer, F. J. Wymer, Assistant Chief Regional Officer, W. H. F. Mepsted, Commercial Superintendent, R. E. Sinfield, Continental Superintendent, and F. D. Y. Faulkner, Public Relations & Publicity Officer.

Western Region: Messrs. K. W. C. Grand, Chief Regional Officer, C. Furber, Commercial Superintendent, C. J. Rider, Public Relations & Publicity Officer,

Hotels Executive: Mrs. E. H. Gasking and Mr. F. G. Hole, Members.

Mr. F. D. M. Harding, General Manager, Pullman Car Co. Ltd., and representatives of overseas railways and travel bureaux in London.

Scunthorpe Staff Hostel

Mr. C. K. Bird, Chief Regional Officer, Eastern Region, on June 18 officially opened the new British Railways staff hostel at Scunthorpe. Mr. Bird was given a presentation key by Mr. J. I. Campbell, Civil Engineer, Eastern Region, with which he unlocked the main entrance door to the hostel and declared it open.

This residental hostel has been built by British Railways to accommodate extra railway staff required in the area to deal with additional rail traffic resulting from the works expansion of local steel firms. The building at present provides accommodation for 40 people in individual rooms, but is capable of extension to house 80, should the need arise.

The hostel is a single-storey building and the grounds will be laid out for recreational facilities. Particular attention has been paid to sound-reducing finishes to the walls, ceilings and floors in the cubicle wings so that men who have to sleep while others are moving about will not be disturbed. A quiet room and a games room are also provided. Provision is made for men wishing to dry clothes, and adequate washing facilities are available.

The contractor responsible for the work is Bernard Pumfrey, 2, Gilliat Street, Scunthorpe.

Civil Engineers' Conversazione

The President, Mr. H. F. Cronin, and the Council of the Institution of Civil Engineers held a Conversazione at the offices of the Institution in Great George Street, London, S.W.1, on Thursday, June 18.

A number of engineering models and specimens of scientific apparatus was exhibited at the Conversazione. Among the models was one shown by Mr. M. G. R. Smith, Civil Engineer, Western Region, illustrating a grouting point used for injecting cement grout, under pressure, into soft fissured clay railway embankments at depths of about 12-17 ft. below top of sleeper.

This device was developed to overcome difficulty experienced in preventing the grout from working its way upwards round the outside of the tube used for injecting it into the embankment.

When the grouting point, which is attached to the tube, is being driven, the slots through which the grout emerges are covered and thus remain clear of soil which would otherwise clog them; when the depth at which the injection of the grout is required has been reached, a bar is introduced within the tube and the forward part of the grouting point is driven further into the soil, uncovering the slots.

A large collar at the uppermost part of the grouting point has two purposes, (1) to enable the point to be attached to the tube; and (2) to create a wedge of soil which will act as a seal and prevent the flow of grout upwards.

The Road Research Laboratory of the Department of Scientific & Industrial Research showed a wind tunnel for producing a mimic blizzard, so that the action of snow fences in checking the drifting of snow on roads and railways can be studied.

Royal Journey Exhibition

The private view of the travelling exhibition organised by the British Transport Commission of Royal train rolling stock and fittings and of reproductions of these and other objects associated with Royal journeys in Britain since the early days of railways took place on June 18, at Battersea Wharf goods station.

The Royal Journey Exhibition is a self-contained travelling exhibition; besides the actual Royal saloons shown, the smaller exhibits are housed in specially fitted coaches. It was opened to the public on June 19, and when it leaves London after July 11 it will tour principal cities, including a visit to Edinburgh for the Festival. The exhibition has been planned and arranged by Mr. J. H. Scholes, Curator (Historical Relics), British Transport Commission, under the aegis of Mr. J. H. Brebner, Chief Public Relations & Publicity Officer, and Mr. Christian Barman, Publicity Officer.

Original Coaches on View

Four special coaches built for Royal use are exhibited. The earliest is Queen Adelaide's coach, built in 1842, with three small separate compartments. The two small saloons built for Queen Victoria by the L.N.W.R. in 1869 are shown as mounted on a single frame in 1895, containing a day and a sleeping compartment. The *décor* in both these is virtually in its original state. The two saloons are on view originally built for King Edward VII and Queen Alexandra, and altered for George V and Queen Mary, who frequently used the train as living quarters during wartime journeys in 1914-18. The same coaches were in use by the Royal family early in the last war. In them, at the suggestion of King Edward VII, decorations follow the style of a Royal yacht.

Former Royal Pilot Engine

One locomotive is on show, former Caledonian Railway Royal pilot engine, 4-2-2 No. 123, in Caledonian livery, brought from St. Rollox Works, Glasgow; this is the first time this locomotive has been seen south of Carlisle.

Smaller exhibits line the walls of two converted coaches. They include schedules of Royal trains of last century, printed on silk, and mountings of the Royal coat of arms for fitting on Royal train engines.

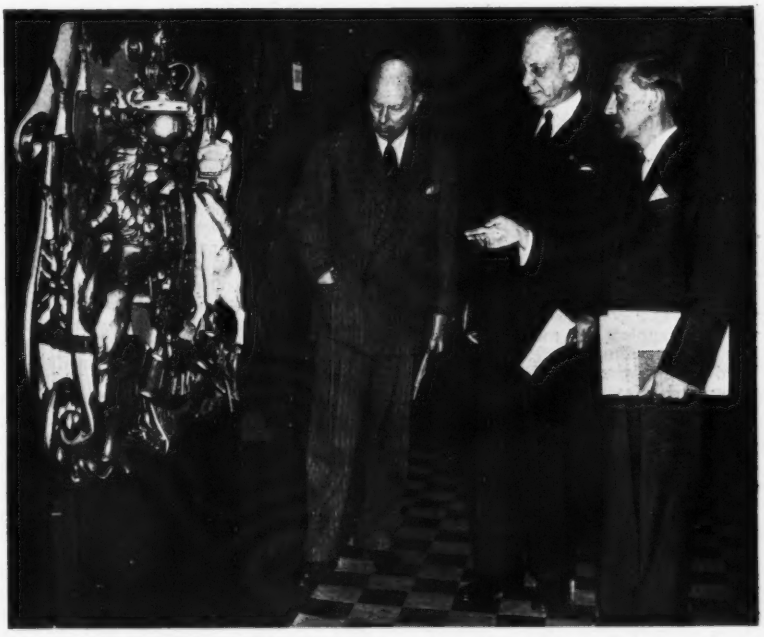
Those present at the private view on June 18 included:—

Lord Leathers, Secretary of State for Co-ordination of Transport, Fuel & Power; Lord Jowitt; Mr. Oliver Lyttelton, Secretary of State for the Colonies;

Sir John Benstead, Deputy Chairman, and Sir William V. Wood, Member, B.T.C.; Lord Latham, Chairman, London Transport Executive; Major-General G. N. Russell, Chairman, Road Haulage Executive; Mr. J. H. Brebner; Mr. Christian Barman; Mr. J. H. Scholes;

British Railways: Mr. John Elliot, Chairman, and Mr. W. P. Allen, Sir Michael Barrington-Ward, Mr. R. A. Riddles, and Mr. J. C. L. Train, Members, Railway Executive; Mr. K. W. C. Grand, Chief Regional Officer, Western Region; Mr. G. Wynne Davies, Publicity Officer, Railway Executive; and Mr. F. D. Y. Faulkner, Public Relations & Publicity Officer, Southern Region.

At the Private View of the Royal Journey Exhibition



Mr. John Elliot (left) and Lord Leathers being shown the coat of arms from Queen Victoria's train by Mr. J. H. Scholes

Parliamentary Notes

Cuban Railway Assets

Sir Henry Linstead (Putney—C.) on June 10 asked whether the Foreign Secretary would now re-open with the Cuban Government discussions on the claims of British shareholders in the United Railways of the Havana.

Mr. Selwyn Lloyd (Minister of State, Foreign Office) replied that the Secretary of State understood that negotiations were in progress in Havana for the sale of the Cuban assets of the company to a private individual, and no call for his intervention seemed necessary at present.

High Rates for Scottish Potatoes

Mr. James Stuart (Secretary of State for Scotland) on June 9, in answer to an allegation by Sir David Robertson (Caithness & Sutherland—C.) that high railway rates for Caithness seed potatoes were adversely affecting sales, replied that if rates were thought too high, the proper course was to try to negotiate a more favourable rate with the Railway Executive, or, if unsuccessful in this, to refer the matter to the Transport Users' Consultative Committee for Scotland.

Major E. A. H. Legge-Bourke (Isle of Ely—C.) said that sometimes it was far cheaper to move those seed potatoes by sea to a port on the Wash, such as Kings Lynn.

Scottish Railway Electrification

Mr. Henderson Stewart (Joint Under-Secretary of State for Scotland) said in answer to a question on June 16 that he understood that the Inverness County Council was in touch with the Railway Executive and the North of Scotland Hydro-Electric Board as to railway electrification advocated by the Council.

Capital Expenditure on Railway Works

Mr. Alan Lennox-Boyd (Minister of Transport) was asked on June 22 by Mr. Arthur Woodburn (Clackmannan & E. Stirling—Lab.) what was the total capital railway works programme approved for Scotland for 1954 and 1955; what proportion this was of the total programme; and what progress was to be made with the Inglis Report proposals for transport in the Clyde area.

In a written reply, he said that the B.T.C. total capital expenditure on railway works was limited by the allocation of capital investment. No such allocation for 1955 had yet been made.

It was not possible for the Commission to apportion in advance its allocation for 1954, or for any year, between the Scottish and other Regions, because authorisation of various programmes and works projects was a continuing process and was not yet complete for many of the headings for expenditure in 1954. Mr. Lennox-Boyd then referred Mr. Woodburn to his answer on May 18 (recorded and commented on editorially in *The Railway Gazette* of May 22; among Scottish Region projects are resignalling in and around Glasgow, and at Dumfries, and the new marshalling yard at Thornton).

Inglis Report on Glasgow Transport

A committee under the chairmanship of Sir Ian Bolton had been set up, Mr. Lennox-Boyd continued, to investigate as a matter of urgency the possibility of closer working arrangements between the railways, the Scottish Omnibuses, and Glasgow Corporation Transport.

The B.T.C. had asked the Railway Executive to report on the possibility of progress in the near future with the main recommendations of the Inglis Report, *i.e.*, the railway electrification and reconstruction schemes.

Diesel Train Sets

The Commission had also asked the Railway Executive to prepare a scheme for a service of multiple-unit diesel train sets to operate between Edinburgh and Glasgow.

Other recommendations of the Inglis Report still were under consideration.

Closing of Railway Lines and Stations

Mr. Alan Lennox-Boyd said in answer to a question on June 22 that from January 1, 1948, to March 31, 1953, the B.T.C. had approved proposals to withdraw passenger services on 97 branch lines, and to close to passenger traffic 216 railway stations on lines otherwise remaining open to traffic.

Since 1951, he added, a general procedure had been in force under which the Railway Executive advised the appropriate Transport Consultative Committee of any proposal to withdraw a branch line service, and no passenger service has been withdrawn without the prior approval of the Committee concerned. Local authorities were consulted and the Consultative Committee only approached when either the local authorities or the Railway Executive thought this desirable.

Accidents to Railway Servants

Mr. Alan Lennox-Boyd, answering a question on June 22, said there were 61 fatalities in 1952 to men working on the permanent way, compared with the average of 59 for the five years 1946-50, though there was an improvement to 46 in 1951. Inquiries were held by the railway employment inspectors into all such fatalities and injuries reported.

Their recommendations invariably received the close attention of the Railway Executive, whose continual educative measures included wide circulation of the reports among the staff. As most of these accidents arose from want of individual care and disregard of simple safety rules, it was hard to see what more could be done.

Loss of "Princess Victoria"

Mr. Alan Lennox-Boyd stated on June 22 that in view of "the immense importance of the subject" of the loss of m.v. *Princess Victoria*, he hoped to be able to publish next week the full report on the disaster.

He drew attention to the steps already taken by the Railway Executive to increase the safety of its ships, and said he was arranging for the statutory safety rules in question to be examined in the light of possible modification.

Urged that the matter should be debated, Mr. Lennox-Boyd pointed out that the B.T.C. had 21 days from the publication of the report and 28 days from the announcement of the Court decision for raising the question of an appeal. He imagined that during that period the subject would not be debatable.

"The question of freeing ports was fully discussed in my Department some months ago," he went on, "and on the best evidence available was rejected. Insofar as this had a bearing on the disaster, I had a responsibility. This may well come up with other matters before another court should such action be taken by the Commission."

Later, he said there was no reason for thinking that vessels operated by the Railway Executive were not, in all respects, seaworthy.

B.T.C. and Executives

Mr. Alan Lennox-Boyd said in answer to a question on June 22 that he had not yet made appointments to fill vacancies that would arise in August and September on the B.T.C. and Executives respectively.

Later he added that he was well aware of the human problem of uncertainty involved. He was constantly in touch with the Chairman of the Commission and hoped soon to make a definite announcement.

Abolition of Road Haulage Executive

Asked if he intended to abolish the Road Haulage Executive, Mr. Alan Lennox-Boyd said on June 22 that in view of the provisions of the Transport Act, 1953, it was clear that the Road Haulage Executive would have to come to an end and there would be some advantages in dissolving it at an early date. He hoped to make an announcement very shortly.

Harrow Accident

Mr. Alan Lennox-Boyd in answer to a question on June 22 said that the report of the Chief Inspecting Officer of Railways on the Harrow accident, now in the hands of the printers, would deal at some length with its cause and the other questions raised. They should await publication at the end of this month.

Staff & Labour Matters

Lodging Turn Dispute

The 12.5 p.m. "Queen of Scots" Pullman express from King's Cross to Scotland had to be cancelled on June 19 because footplate staff booked to work the train refused to lodge away from home. The turn, which involves drivers and firemen based on the Copley Hill depot at Leeds, had been agreed at local level subject to approval by the Headquarters of the A.S.L.E.F.

With a view to resolving the difficulty, a meeting was arranged on June 22 between representatives of the Railway Executive and the A.S.L.E.F., as a result of which agreement was reached on a basis for fresh talks on the principle of lodging teurns. It was also agreed that the disputed lodging turn affecting the "Queen of Scots" Pullman would be worked.

The following statement was issued after the meeting:—

"At a meeting held at Marylebone today between the Railway Executive and the President and General Secretary of the Associated Society of Locomotive Engineers & Firemen, a satisfactory basis was agreed on which meetings of the sub-committees will be resumed immediately for further consideration of the introduction of additional lodging turns for enginemen.

"On the basis of the agreement reached, the disputed Leeds turn, involving the 'Queen of Scots' Pullman, will be worked on a lodging basis."

Paint Drum Storage Rack

Provision for periodical turning

A rack for storing 5-gal. drums of paint, which not only saves space but allows for the turning of the drums each week by the simple process of moving a lever, has been designed by a member of the staff of the London Midland Region.

The principle of construction is that the shelves on which the drums are stored are pivoted in the centre. Thus they may be tilted down to the left, with the result that the drums of paint are located at that end of the shelf. By downward movement of a lever at the left-hand side of the rack, the shelves can be tilted downwards to the right, so that the drums roll to the opposite end of the shelves, and thus receive the necessary turning movement.

It is probable that in a full-size rack the necessary force to tilt the shelves would not be obtainable through the simple lever arrangement applied in the model described, and that some form of worm gear would be necessary. The rack incorporates a hoist at one end operated by a handle at the other end of the structure. This is for the purpose of raising and lowering the drums to and from the shelf on which it is desired to store them.

G.N.R.(I.) Summer Timetable

There are some interesting changes in the Great Northern Railway (Ireland) summer timetable which operates from June 14 until September 6. On the main line the 9 a.m. express from Dublin to Belfast runs in two portions from Dundalk. The first part is non-stop to Belfast, arriving at 11.45 a.m. The Northern Customs examination of passengers takes place at Belfast. The second part with the through Derry coach (for Donegal passengers) which connects with the 11.15 a.m. Derry express from Belfast at Portadown, arrives in Belfast at 12.35 p.m. The afternoon express to Dublin leaves Belfast at 3 p.m. instead of 2.45 p.m. and arrives at Amiens Street at 6.5 p.m. The alterations in the through Belfast-Cork "Enterprise" workings are given in our Overseas columns.

Two extra trains run on Sundays between Dublin and Belfast; one from Belfast at noon, arriving at 3.10 p.m., and the 9.45 a.m. Derry to Belfast express giving a connection at Portadown to Dublin passengers. The other train leaves Dublin at 5 p.m., arriving Belfast at 8.10 p.m., and this train provides a connection at Portadown for the Derry line. On Sundays through the summer, special trains will be provided from Amiens Street to seaside stations on the G.N.R. line north of Dublin.

Services to North West

On weekdays a connection at Portadown to Monaghan, Clones and Enniskillen is given by the noon Belfast-Dublin express. A diesel train leaves Portadown at 12.45 p.m. for Clones and a railcar leaves Clones for Enniskillen at 2.45 p.m.

A late service for Enniskillen from both Dublin and Belfast direction continues to be provided by a railcar from Clones to Enniskillen at 9.45, arriving Enniskillen at 10.33 p.m. This connects at Clones with a service leaving Portadown at 6.52 p.m., and with the 8 p.m. from Dundalk.

The "Bundoran Express" again operates to Pettigo, Ballyshannon and Bundoran. It leaves Dublin at 8.45 a.m. and arrives at Bundoran at 2 p.m. There are extensive connections to many parts of Donegal by G.N.R. bus services from Ballyshannon. For pilgrims to Lough Derg from the midlands and west a railbus leaves Cavan at 10.45 a.m. and connects at Clones. The return express leaves Bundoran at 12.10 and arrives in Dublin at 5.45 p.m. There is a restaurant car in service between Dublin and Clones, and the train runs non-stop through Northern Ireland territory between Clones and Pettigo in each direction.

Tour of Electric Traction Works

Visit to the Stafford and Preston factories of the English Electric Co. Ltd.

On Monday, June 22, a special train left London carrying guests of the English Electric Co. Ltd. on a two-day tour of its Stafford and Preston factories. The visitors, who included a number of overseas guests, Government officials, and members of the technical Press began their inspection with a tour of the Stafford Works, where they inspected the Nelson Research Laboratories and then took tea with the Chairman and Directors, before leaving for Southport.

On Tuesday morning the visitors were taken to the Preston Works of the company, where they were able to see something of the company's traction and aeronautical activities. Among the former were included locomotives and equipment for the Netherlands, Spain, British Railways, Queensland, and Victorian Government Railways and many other types of equipment. In the afternoon, the guests visited Samlesbury, where they saw a flying display by one of the English Electric "Canberra" aircraft, before leaving by special train for London.

The visitors were received at Stafford by Sir George Nelson, Chairman & Managing Director of the English Electric Co. Ltd., who gave an outline of the history of the firm and its activities, and referred to the amount of research being continually undertaken, which covered all aspects of engineering, including electronics, television, the application of ceramics, and so on.

Visit to Preston Works

On Tuesday the visitors were taken on a conducted tour through the company's Preston works before leaving for Samlesbury Airfield. Among the many products on view in various stages of production were electric motorcoach equipment for the electrified lines of the Polish State Railways, and 3,600 h.p., 3,000-V. d.c. main-line electric locomotives for the Spanish National Railways, which are among the most powerful of their type yet built in this country.

The latter locomotives will operate initially on the 38-mile Ujo-Busdongo section of the Oviedo-Leon route, which carries heavy mineral traffic. This section has a ruling grade of 1 in 50 with severe curvature. The Vulcan Foundry Limited is building the mechanical parts. The locomotives, 63 of which are being supplied, have a maximum tractive effort of 67,000 lb., and a continuous tractive effort of 30,500 lb. at 36 m.p.h.; maximum speed is 68 m.p.h.

Also in course of erection are twenty-five 400-h.p., 1,500-V. d.c. main-line locomotives for the Victorian Government Railways, for use on heavy freight and passenger trains on the Gippsland main-line between Melbourne and Traralgon. The locomotives have a maximum tractive effort (25 per cent adhesion) of 54,000 lb., and a continuous tractive effort (full field) of 25,200 lb. at 30 m.p.h. and a maximum speed of 75 m.p.h.

The visitors also saw in course of construction the 1,500 h.p. diesel-electric main-line locomotives for the Queensland Government Railways; the diesel engines of these locomotives are derated to 1,290 h.p. at site. They have a maximum starting tractive effort of 30,000 lb. at 12·4 m.p.h. and a maximum speed of 45 m.p.h. The Vulcan Foundry Limited is building the mechanical parts.

Mr. H. G. Nelson, Deputy Managing Director, the English Electric Co. Ltd. speaking at the luncheon, said that they had seen something of the activities of the company. Their aim was to achieve standardisation of traction equipment and so on, as by these means cheaper production would be possible, and the company was making every effort in this direction.

Contracts & Tenders

Cambrian Wagon Works Limited has received an order for 150 underframes for covered goods wagons for the Great Northern Railway (Ireland).

The Railway Executive has placed the following contracts in its 1954 programme:—

Birmingham Railway Carriage & Wagon Co. Ltd. : 330 30-ton bogie bolster wagons.

The Fairfield Shipbuilding & Engineering Co. Ltd. : One 25-ton and three 21-ton flat trolley wagons.

Head, Wrightson & Co. Ltd. : three 40-ton bogie flat trolley wagons.

The Victorian Railways have placed the following orders:—

Martin & King (Pty.) Limited (Victoria) : 120 electric trailer coaches.

Bradford, Kendall Limited (New South Wales) : 420 bogies for electric motor coaches and trailers.

The orders complement that for 90 motor coaches already placed with the Gloucester Railway Carriage & Wagon Co. Ltd. The stock is for Melbourne suburban services.

British Railways, North Eastern Region, have placed the following contracts:—

Consolidated Pneumatic Tool Co. Ltd., London, S.W.6: supply of two portable air compressors for Shildon Wagon Works.

R. Rennie & Sons, Hartlepool: erection of accommodation for carriage cleaners at West Hartlepool.

SUNVIC CONTROLS LIMITED: CHANGE OF ADDRESS.—The sales office of Sunvic Controls Limited has been transferred from 132-5, Long Acre, London, W.C.2, to No. 1 Factory, Eastern Industrial Estate, Harlow New Town, Essex. (Tel.: Harlow 2031.)

Notes and News

Assistant Engineer, Mechanical, Required.—Applications are invited for the post of assistant engineer, mechanical, between 25 and 35 years of age, required by the Crown Agents for the Colonies, for its London office. See Official Notices on page 747.

Leading Draughtsman Required.—Applications are invited for the post of leading draughtsman required by the Crown Agents for the Colonies for its London Office. Candidates should have been apprenticed in carriage and wagon building at one of the works of British Railways or of a contractor. See Official Notices on page 747.

European Passenger Timetable Conference at Athens.—At the invitation of the Hellenic State Railways, the European Passenger Timetable & Through Carriage Conference this year is to be held in Athens on October 7-17.

Cross-Country Green Line Route.—The first cross-country Green Line service is to be introduced by London Transport as an experiment on July 1. It will link Gravesend with Windsor *via* Bromley and Croydon through a 55-mile arc of important outer London towns lying south of the Thames. Coaches on the new service (Route 725) will run hourly every day including Sundays; the through single fare from Gravesend to Windsor will be 6s. 11d. The actual journey time by coach from Gravesend to Windsor will be 2 hr. 54 min.

New Cafeteria and Bar at Liverpool Lime Street.—As a further step in implementing the policy of modernising refreshment room facilities throughout the country, the Hotels Executive opened a new cafeteria and bar at Liverpool Lime Street on June 25. The new cafeteria affords ample space; it has adjacent kitchen and service facilities on the same floor level, and separate bar and cigarette and confectionery kiosk, and provides a variety of refreshments for travellers, from hot meals and snacks to iced drinks. The planning has been carried out to the requirements of the Hotels Executive by Mr. J. M. Harrison, Architect to British Railways, London Midland Region. In conformity with the general policy of the Hotels Executive, the amenities for the catering staff at Liverpool Lime Street have also been improved.

British Railways Record Ore Traffic.—A record tonnage of iron ore, 358,000 tons, was moved by British Railways during the week ended June 13. In the same period, 233,503 tons of iron and steel were conveyed from the principal steel works, the heaviest forwarding for nine months. During the week ended 6 a.m. on June 22, 3,240,290 tons of deep-mine and opencast coal were cleared by rail. The weekend figure was 325,540 tons. Because of early holiday traffic and the large number of people returning home after visiting London to see the Coronation decorations, nearly 20,000 more passengers were conveyed from the London termini last Saturday, June 20, than on the corresponding Saturday last year.

Withdrawal of Wearhead Branch Passenger Service, N.E. Region.—After detailed inquiries into the working of the passenger train service on the line between Bishop Auckland and Wearhead, N.E. Region, it has been decided that it will be necessary to withdraw it on and from June 29. From this date, Witton-le-Wear, Harperley, Wolsingham, Frosterley, Stanhope, Eastgate, Westgate-in-Weardale, St. John's Chapel, and Wearhead stations will no longer be served by passenger trains, but will continue to deal with freight and parcels traffic. Arrangements have been made for improvement of the local bus services beginning on June 29 in order to maintain passenger facilities.

Long-Distance Coach Licence Upheld.—Northern Roadways Limited has been informed by the Minister of Transport that its licences to operate express services between Glasgow and Birmingham, and Glasgow and Bournemouth, have been upheld, together with a licence for an express tour to Ramsgate from Glasgow. This decision follows appeals against these licences lodged by the Railway Executive and State-owned road undertakings. Permission has also been given to Northern Roadways Limited to pick up in Birmingham passengers for the North with single or return tickets. Hitherto the company had only been permitted to pick up passengers in the Midlands with return tickets to Glasgow.

A.E.I. Ordinary Stock Issue.—Applications from stockholders of Associated Electrical Industries Limited took up only 30 per cent of the £2,205,899 ordinary stock offered recently at 75s. per £1 unit. The stock was bought by Morgan Grenfell & Company from the International General Electric Company of New York.

British Railways, Southern Region, Lecture & Debating Society; Ramble over former Surrey Iron Railway.—On Saturday afternoon, July 18, the British Railways, Southern Region, Lecture & Debating Society, is having a social ramble over the course of the former Surrey Iron Railway. The party, which is limited to 25 members and their friends, will leave Coulsdon at 2.15 p.m., finishing at Merstham about 7 p.m.

L.M.R. Prizewinning Resort Poster.—For the second time in three years a resort poster produced by the department of the Public Relations & Publicity Officer, London Midland Region, has won the Tattersall Trophy of the Association of Health & Pleasure Resorts. For the second time the poster was a design for Blackpool and the artist this time was Abram Games. The poster was reproduced in our April 24 issue; it is in twelve colours, with a sand-castle-and-shell motif of Blackpool Tower.

East Kent Road Car Company Results.—The directors of the East Kent Road Car Co. Ltd. state that because the equivalent rate of interim dividend on the ordinary capital as increased by 200 per cent to £1,350,000 by an issue of fully-paid shares last December would be only 1·66 per cent as against 5 per cent paid for several years past on the former capital, and in view also of the seasonal nature of the company's business, they have decided to revert to the prewar practice of paying an annual dividend. Accordingly, no interim dividend will be paid for the year ending September 30 next. The total distribution for 1951-52 was 25 per cent on the old capital, including a bonus of 10 per cent.

Talgo Train Development.—The A.C.F.-Talgo demonstration train which was first shown to the American railways in 1949 (and was described in our March 18, 1949, issue) is being displayed at the Railway Supply Manufacturers' Association's exhibition at Atlantic City (see our issue of June 12). This is a shorter version of two Talgo trains which have been operating in normal revenue-earning service in Spain for nearly three years. The trains have been developed and built by the American Car & Foundry Company on the basis of Spanish patents. Developments which will increase the adaptability of the Talgo type train to all types of railway passenger service have been incorporated in the latest demonstration version.

European Inland Transport Conference.—The representatives of O.E.E.C. member countries, of Jugoslavia, of Spain, and of U.S.A., who have been meeting intermittently in Paris since March to discuss the "rational development of European inland transport," have now concluded their sittings with the recommendation that a European conference of Ministers of Transport be set up on a "durable and wider basis." The representatives were

Advertising Display on Goods Depot Frontage

Illuminated portion of an advertising display which has brightened the frontage of the L.M.R. Goods Depot at Somers Town

OFFICIAL NOTICES

The engagement of persons answering Situations Vacant advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

THE PERUVIAN CORPORATION have the following vacancies on the railways in Peru:—Central Railway. ACCOUNTANT (Traffic Auditor). About 30 years of age, preferably single with general auditing and railway accounting experience. Northern Railways. DIESEL ENGINEER with practical experience on diesel locomotives and railcars and workshop management. A knowledge of the Spanish Language is preferable in all these appointments or willingness to learn within 6 months. Apply: SECRETARY, 144, Leadenhall Street, London, E.C.3.

RAILWAY DRAUGHTSMAN-SURVEYOR Required by large firm railway contractors, applicants must have ability to carry out site surveys, plot same in layout form to good working scale (detailing for manufacture of turnouts etc., done by other draughtsmen), capable of full use of theodolite and level, duties to include site supervision of contracts in progress, age 25-30 years, man with British Standard Specification experience preferred, conditions of employment to include provision of car, all travelling and general expenses, five-day week on rota system, comprehensive, superannuation, scheme, etc., write in first instant, stating age, experience and salary required.—Box 861, *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

FOR SALE. B.H. Rails, 95 lb. Large quantity. PIKE BROS., Private Sidings, Colnbrook, Bucks. Phone 175.

ASSISTANT ENGINEER (MECHANICAL) required by the Crown Agents for the Colonies for the LONDON OFFICE. Salary scale £575 × £25—£750 × £30—£900 a year. The £575 minimum is linked to entry at age 25 and is subject to increase at the rate of one increment for each year above that age up to but not exceeding age 34. Fully qualified officers of at least 27 years of age who have completed at least two years' satisfactory service are eligible, under certain conditions, for a special increase in salary of £75. Pay Addition to basic salary payable at the rate of 10% on first £500 and 5% on second £500. Extra duty allowance of 8% on basic annual salary plus Pay Addition also payable at present. Engagement will be on unestablished terms with a prospect, after satisfactory service, of appointment to the established and pensionable staff in due course, vacancies permitting. Qualifications:—Candidates between 25 and 35 years of age should have passed the qualifying examination for Associate Membership of the Institution of Mechanical Engineers, or equivalent examination. They should have served an apprenticeship or pupilage in the Locomotive or Rolling Stock Department of the British Railways or with a firm of locomotive or rolling stock builders, or with a firm specialising in the manufacture of wharf or break-down cranes. They should also have subsequent drawing office experience in the design of locomotives or carriages and wagons and diesel railcars or cranes, together with a sound knowledge of modern workshop practice. Duties include preparation of contract specifications, examining and approving drawings, design calculations, and technical correspondence. Write to the CROWN AGENTS, 4, Millbank, London, S.W.1. State age, name in block letters, full qualifications and experience and quote M2A/29209/RA.

BOUND VOLUMES.—We can arrange for readers' copies to be bound in full cloth at a charge of 25*s.* per volume, post free. Send your copies to the SUBSCRIPTION DEPARTMENT, Tothill Press Limited, 33, Tothill Street, London, S.W.1.

LEADING DRAUGHTSMAN required by the Crown Agents for the Colonies for the LONDON OFFICE. Salary £570 by £20 to £670 by £5 to £675 a year. Pay Addition to basic salary payable at the rate of 10% on first £500 and 5% on remainder. Extra Duty Allowance of 8% on annual basic salary plus Pay Addition also payable at present. Engagement will be on unestablished terms, terminable by one month's notice from either side, with the prospect, after satisfactory service, of appointment to the established and pensionable staff, vacancies permitting, and promotion to more senior grades if suitably qualified. The normal working week is 45½ hours and Extra Duty Allowance is paid for hours worked in excess of 42. QUALIFICATIONS. Candidates should have been apprenticed in carriage and wagon building at one of the Works of British Railways or of a Contractor. They should have had experience in designing detail parts of carriages and wagons and must be good draughtsmen. A knowledge of locomotive construction would be an advantage. Write to the CROWN AGENTS, 4, Millbank, London, S.W.1. State age, name in block letters, full qualifications and experience and quote M2A/29909/RA.

N.E.R. HISTORY.—Twenty-Five Years of the North Eastern Railway. 1898-1922. By R. Bell, C.B.E., Assistant General Manager, N.E.R. and L.N.E.R. Companies, 1922-1943. Full cloth. Cr. 8vo. 87 pages. 10*s.* 6*d.*—*The Railway Gazette*, 33, Tothill Street, London, S.W.1.

RAILWAY MAINTENANCE PROBLEMS. By H. A. Hull (late District Engineer, L.M.S.R.). Valuable information. With much sound advice upon the upkeep of permanent way. Cloth. 8½ in. by 5½ in. 82 pp. Diagrams. 5*s.* By post 5*s.* 3*d.* *The Railway Gazette*, 33, Tothill Street, London, S.W.1.

originally convoked by the resolution of the Council of O.E.E.C. last December to study a report on the transport system of the U.S.A. and to discuss its application to Europe. If this recommendation is accepted by the O.E.E.C. Council and the Governments concerned, an 18-member conference would take the place of the eight-member conference of Transport Ministers of the six Schuman plan countries, Switzerland and Austria, called on the initiative of Monsieur André Morice, the French Minister of Transport.

Renaming of Stations in Scotland.—The Scottish Region announces that the following passenger stations in Scotland have been renamed: Barnhill (L.N.E.) becomes Barnhill (Glasgow); Bonnybridge (L.N.E.) becomes Bonnybridge High; Clarkston (L.N.E.) becomes Clarkston (Lanarkshire); Coatbridge (L.M.S.) becomes Coatbridge Central; and Helensburgh becomes Helensburgh Central.

Road Accidents in April and May.—During April casualties on the road totalled 17,891, an increase of 1,276 over 1952. Five more persons were killed, the total being 344, and the number of seriously injured rose by 450 to 4,469. Figures reported so far for May show a total of 21,151 casualties. There was an increase of 76 in the number killed, the total being 428, while a total figure of 5,067 seriously injured was 615 higher than in the previous year.

Heavy Goods Vehicle Speed Limit Unchanged.—Mr. Alan Lennox-Boyd, Minister of Transport, announced in the House of Commons on June 22 that he had decided "with reluctance" that the present time was not opportune for him to place regulations raising the speed limit for heavy goods vehicles from 20 to 30 m.p.h. before Parliament for affirmative resolution. While there had been representations from manufacturers and users of such vehicles that the limit should be raised, the Minister did not think that action on his part to raise the speed limit could be fruitful and effective unless there was agreement in the industry as to the changes in the existing arrangements which might follow.

Maidstone & District Motor Services Limited.—Maidstone & District Motor Services Limited has declared a dividend for the year ended March 31 last of five per cent on doubled capital (20 per cent on old capital). The group net profit is £90,429, after deduction for tax of £45,192 and depreciation £180,778. The net profit of the parent company is £78,086. The sum of £46,094 has been transferred to general reserve, and £131,211 carried forward.

Central Argentine Railway Limited.—The report of the joint liquidators of the Central Argentine Railway Limited for the year ended April 1, 1953, states that steps continue to be taken to carry into effect the terms of the agreement with the Argentine Government formalised on December 24, 1952. A report by the representatives in Buenos Aires has been received and adopted by the liquidators of all the companies concerned, and the inter-company payments arising therefrom have since been made. There are a few lawsuits outstanding with private persons in Argentina which, in spite of the efforts of the legal representative in Buenos Aires, have not yet been settled, and certain transactions connected with the agreement with the government still to be completed. To hasten the completion of all outstanding matters and to pave the way for a final distribution to the stockholders, the liquidators (in association with the liquidators of the other British-Argentine railway companies) requested Mr. R. Montgomery, their representative in Buenos Aires, to come to London to confer with them. A general meeting was due to be held yesterday (June 25).

Southdown Motor Services Limited.—Southdown Motor Services Limited has declared a final dividend of five per cent for the year to March 31 last, on capital increased by a 200 per cent scrip issue, making, with a ten per cent interim on former capital, a total dividend equivalent to 8¼ per cent on present capital. The net profit for the year was £209,409, after deduction of £193,648 for tax and £209,937 for depreciation. The net profit for the previous year was £273,460. The sum of £116,177 was transferred to general reserve, leaving £198,988 to be carried forward. The annual general meeting will be held on July 6.

Kitchen & Wade Limited.—The group trading balance of Kitchen & Wade Limited for the year ended March 31, 1953, was £201,927 (against £267,806 for the preceding year), and the net profit £75,517 (£101,978). It is proposed to maintain the dividend at 25 per cent. The Chairman, Mr. A. Kitchen, reports a falling-off in orders "for the first time for nearly a generation," though it may not affect the present year's results.

Railway Convalescent Homes.—A balance of income over expenditure of £47,169 is shown in the report of the Railway Convalescent Homes for the year ended December 31, 1952. Railway staff collections brought in £167,851, and donations from the public, etc., amounted to £1,108. With income from investments and sundry receipts, the total was £174,344. A table of patients received for every year since 1901 (the homes were founded in 1899) shows a total of 220,762; 6,917 patients were received last year. The President for 1953 is Sir John Benstead.

Prosperity Bonus for Crompton Parkinson Employees.—In the expectation that the overall trading results of the Crompton Parkinson organisation at home and abroad during the financial year ending June 30, 1953, will be very satisfactory, the directors announced recently that "in accordance with their policy of sharing the prosperity of the company with its employees, a special bonus will be paid to all those in the employment of the Company on May 29, 1953, who are still employed at the time of payment." In

general, the amount of the bonus will be equivalent to, or more than, about two weeks' wages or salary. The full bonus will be paid to whole-time employees with twelve months' continuous service but even those with only one month's service with the company will receive one-quarter of the bonus.

Siemens Brothers Limited.—Consolidated trading profits for 1952 of Siemens Brothers Limited amounted to £1,431,346, as compared with £1,275,037 in the preceding year. After taxation the net profit of £556,425 showed a decrease of £23,517. In a statement with the report, the Chairman noted a temporary slackening of orders, particularly for telephone exchange equipment from Government departments at home and abroad, but it was believed that the factors causing this decline would disappear and that the company must be ready to deal with heavy demands. The trading record for the year to date had been satisfactory.

New South Wales Premier at B.T.H. Rugby Works.—On June 22 the Hon. J. J. Cahill, Premier of New South Wales, visited the Main Works of the British Thomson-Houston Co. Ltd. at Rugby. He was accompanied by Mrs. Cahill, their two daughters, and Mr. Tallentire, Private Secretary. On arrival at the works Mr. Cahill was welcomed by Mr. E. H. Ball, Managing Director, British Thomson-Houston Co. Ltd. and other directors. During a tour of part of the B.T.H. works, Mr. Cahill saw several items of heavy plant for New South Wales in various stages of manufacture. Among them were two 30-MW. turbo-alternators for Wallerawang power station, some of the output from which will be used for the Sydney-Lithgow railway electrification. The Premier's tour also included a visit to the lamp factory where filament lamps were seen being made.

British Electric Traction Co. Ltd.—Aggregate net profit of the British Electric Traction group for the year ended March 31 last, after providing £1,046,602 (£960,027) for taxation, was £1,191,635 (£1,176,375). Allowing for minority interests in subsidiaries, the proportion attributable to the parent company was £1,058,560 (£1,054,484). Deducting the balance of profits retained by subsidiaries, £344,594 (£399,601), the net profit of the parent company was £713,966 (£654,883). Dividends of 8 per cent, as last year, are recommended on account of the 6 per cent cumulative participating preference stock and the non-cumulative preferred ordinary stock; 35 per cent (25 per cent) on the deferred ordinary stock; and 35 per cent (25 per cent) on the "A" deferred ordinary stock.

Vending Machines at Stations.—Mr. T. Marson Till, Chairman of the Associated Automatic Machine Corporation Limited, said at the company's annual meeting on June 10 that full operation of its vending machines in the future on railway stations presented some difficulties and was still under active consideration. Not only did the remaining machines require a complete workshop overhaul, but owing to changed conditions the penny slots would have to be altered to twopence, threepence and sixpence. Not all the machines lent themselves to this adjustment. For the time being, therefore, the resumption of selling sweetmeats through vending machines was being restricted to a reduced number of stations, by agreement with the Executives concerned, to whom the company was very grateful for their co-operation. The results would enable the directors, with those of the British Automatic Co. Ltd., to decide whether the large capital outlay that would be required to make a full scale resumption of selling through automatic vending machines would be justified.

Electric Traction Society.—A London & Home Counties Electric Traction Society has been formed recently to publicise the benefits of electric transport and to encourage the provision, improvement, and extension of this form of transport in the area denoted by the society's title. Membership is open to those who are interested in the subject professionally or otherwise, and details may be obtained from the Honorary Secretary, Mr. J. Thompson, 31, Atheldene Road, Earlsfield, S.W.18.

Forthcoming Meetings

June 29 (*Mon.*).—Indian State Railways Annual Dinner at the Rembrandt Hotel, Thurloe Place, London, S.W.7, at 7 for 7.30 p.m.

July 1 (*Wed.*) to 3 (*Fri.*).—Institute of Transport Annual Congress in Glasgow.

July 4 (*Sat.*).—Irish Railway Record Society. Half-day visit to the railway system of Arthur Guinness Son & Co. (Dublin) Ltd.

July 7 (*Tue.*) and July 9 (*Thu.*).—Railway Students' Association. Evening visits to resignalling installation between Selhurst Junction and Victoria, British Railways, Southern Region.

July 10 (*Fri.*). to July 12 (*Sun.*).—Industrial Co-Partnership Association. 36, Victoria Street, London, S.W.1. Weekend Conference at Somerville College, Oxford.

Railway Stock Market

Business in stock markets has again been on a small scale and prices in most sections recorded irregular movements and were generally slightly lower on balance. International uncertainties have dominated sentiment, and buyers remained cautious. Another reason for a "go slow" attitude in markets is the widespread disposition to await the first of the big steel issues. This is generally expected to be an offer of shares in Stewarts and Lloyds, but whether it is to be made next month may depend on the trend in stock markets. It may be that the decision will be to leave the first of the steel issues until September when markets may be more buoyant.

General belief is that Stewarts and Lloyds' shares would not be issued at a price showing a yield of more than 7 per cent. The issue terms are awaited with considerable interest, particularly as it will give the basis on which British Funds can be exchanged into steel shares. The City is convinced that, when it comes, the Stewarts and Lloyds issue will give a good send off to the other steel issues which are to be made at intervals during the next eighteen months.

There was only very limited business in foreign rails, though United of Havana stocks again attracted a fair amount of attention, awaiting news of the outcome of the take-over talks. The market view persists that not less than the equivalent of £5,000,000 would be accepted by the directors for the railway. The company's various stocks recorded moderate fluctuations, and at the time of going to press were slightly lower on balance with the "A" at 63½, the "B" also around this price, the second income stock 24 and the consolidated stock 3¾. White Pass no par value shares were again active, but have declined to $29⅞, with the convertible debentures £104½.

In other directions, Antofagasta ordinary stock eased to 8½, while the preference stock was 43 and the 4 per cent debentures 44. Guayaquil & Quito first bonds changed hands around 38, Dorada ordinary stock marked 48, and Chilian Northern first debentures around 26. Emu Bay 4½ per cent debentures marked 54½ and Nyasaland Railways 3½ per cent debentures 74, while in Indian stocks, Barsi has transferred at 120 and West of India Portuguese at 96.

In home stocks, Central London guaranteed changed hands at 81 and Metropolitan around 44. Among old Russian railway bonds, Russian South Eastern have marked 13s. 9d. Elsewhere, Costa Rica ordinary was 11½, the 6½ per cent first debentures 67½, and the 6½ per cent second debentures 61½. International of Central America common shares were quoted at $15½. Manila "A" debentures were 80, the "B" debentures 67½, the preference shares 8s. 3d., and the 1s. ordinary shares 3s. 9d.

Canadian Pacifics eased to $46⅛xd, the 4 per cent preference stock strengthened to £63½xd and the 4 per cent. debentures were £82½. Business around 72 was recorded in Mexican Central "A" debentures. Nitrate Rails shares firmed up to 21s. 3d. and Taltal shares were 14s. 6d. San Paulo units were 5s. 9d. Among French railway sterling bonds Midi 4 per cents kept at 79.

Road transport shares have been steady with Southdown at 31s. 6d.xd, and Lancashire Transport 49s. 6d., while West Riding rose to 36s. 3d.xd and Aldershot Traction marked 32s. 6d. B.E.T. deferred stock has changed hands around £540xd. The decision to split the stock into 5s. units continues to be welcomed, because it will mean a much more active market and give the small investor a chance to acquire an interest. Based on the current quotation, the price of the 5s. units would be just over 27s. and on the past year's 35 per cent dividend there would be a yield of nearly 6½ per cent.

Engineering and kindred shares were again quiet, awaiting news whether the first of the steel issues is to be made next month. Guest Keen strengthened to 46s. 9d., Vickers were 47s. 6d., Cammell Laird 5s. shares 11s. 1½d., and John Brown 35s. 4½d., while Babcock & Wilcox firmed up to 62s. 9d. and T. W. Ward were 71s. 6d. Neepsend were 26s. 10½d. Ruston & Hornsby improved to 37s. 3d. on market talk of higher dividend possibilities, though a higher payment is not generally expected. British Aluminium at 37s. 6d. showed firmness on the Government's decision to allow resumption of free trading in the metal.

Among shares of locomotive builders and engineers, Beyer, Peacock were 32s. 6d., Hurst Nelson 39s. 3d., North British Locomotive 13s., Vulcan Foundry 20s. 3d., Gloucester Wagon 10s. shares 11s. 3d., Wagon Repairs 5s. shares 11s. and Charles Roberts 5s. shares 14s. 9d. Central Wagon were 69s.